THE REPORT

OF THE

PRESIDENT

OF

QUEEN'S COLLEGE, BELFAST,

FOR

THE YEAR ENDING 31st JULY, 1870.

Presented to both Houses of Parliament by Command of Her Majesty.

DUBLIN:
PRINTED BY ALEXANDER THOM, 87 & 88, ABBEY-STREET,
FOR HER MAJESTY'S STATIONERY OFFICE.
1871.

[C.—451.] *Price 7½d.*

CONTENTS.

Page

REPORT, ... 3

APPENDIX—

1. Queen's College, Belfast, and Queen's University, ... 9
2. Return of the Number of Students attending each Class in the Queen's College, Belfast, in each Year, ... 12
3. Return of the Amount of Fees received by each Professor in the Queen's College, Belfast, in each Year, . . 14,15
4. Account of the Expenditure of one Year's Additional Grant to the Queen's College, Belfast, ending 31st March, 1869, . 14,15
5. General Class Examinations, Queen's College, Belfast, 1869–70, 1870–71, ... 17
6. Return of the Number of Lectures delivered by each Professor in the Queen's College, Belfast, in each Year, ... 18
   - October Examinations of Queen's College, Belfast, 1870, . 20
   - Hours of Lectures, Queen's College, Belfast, for Session 1869–70, ... 22
7. An Enlarged Digest of Subjects and Courses pursued in Queen's College, Belfast, ... 24
8. General Class Examination at the end of the Session 1869–70, . 33
   - Matriculation Examination, October, 1870, . . . 79
   - Scholarship Examinations, October, 1870, . . . 81

THE REPORT

OF THE

PRESIDENT OF QUEEN'S COLLEGE, BELFAST,

FOR

THE YEAR ENDING 31st JULY, 1870.

TO THE QUEEN'S MOST EXCELLENT MAJESTY.

MAY IT PLEASE YOUR MAJESTY,

I have the honour of presenting to your Majesty the following Report regarding the condition of this College for the year ending the 31st of July, 1870, embracing the three terms which constitute the Session. The first term commenced, as usual, in October, when the various examinations for Matriculation and Scholarships were held, according to the notices in the Calendar; after which time the different courses of lectures and study were vigorously prosecuted in the various departments. During that Session 353 Students were in attendance on the various courses of lectures and examinations.

Perhaps in no previous Session have the Students, as a body, manifested a stronger desire to acquire knowledge and to lay the foundation of their future promotion and usefulness in the world, than during the collegiate terms to which this report refers. The labours of those who thus wish to distinguish themselves and become valuable members in their respective callings, owing to the number of lectures to be attended and the many examinations, both collegiate and university, prepared for and passed, are such as to give full, but not oppressive occupation to the mental powers of the Students; and I feel bound to express my admiration of the zeal and spirit with which their duties are encountered. Of course, Belfast College, like every other, must have within its walls some who enter it imperfectly prepared, and others who do not appreciate the great advantages within their reach; but that the standard of education has been immensely elevated by the existence of the College itself, and with it, the desire of the Students generally to obtain learning and distinction, the distinguished professors of the College are agreed in bearing their valuable testimony.

A variety of circumstances have combined to secure this gratifying result so ardently desired by the founders of the Queen's Colleges. The courses required, both in the College and by the

A 2

Queen's University, are such as train and educate the mind, whilst storing it with sound and useful knowledge. The possession of valuable, well selected libraries, and of apparatus, and objects of illustration; the remarkable and constant successes the Students of this College have had in carrying high, often the highest places, in all the branches of the Civil Service; the fact that many of the alumni of the College are acting in academies, and privately as tutors and instructors of the rising generation; and, above all, the unflagging zeal and admirable prelections of the professorial staff; all these have contributed to place this College on the solid and broad foundation on which it rests.

Much remains to be done both in extending the library and augmenting the apparatus, so as to keep them fully and constantly up to the ever advancing conditions of science, literature, and experiment. Once again I express my anxious hope that your Majesty's Government may be pleased soon to restore the portion of the grant of £1,600 a year, for a time, made annually for increasing the library and apparatus of the College, but which was applied, six years ago, to augment the salaries of some professors. I venture to record my opinion that as this augmentation was just and necessary, it would have been expedient to have supplied it otherwise, without trenching on funds essentially necessary for the progress and public utility of the College.

As I hope, with the assistance of the Registrar, to make out at the opening of next Collegiate Session, a complete list of the Students who have distinguished themselves and brought honour to the Colleges in the various departments of the public service, I only notice generally now the gratifying circumstance that during the past year, several Students of this College have, in the Indian, and other competitive examinations, carried, on distinguished, some of them on most brilliant answering, the first places amongst the successful candidates.

This College, viewed as a member of the Queen's University in Ireland, continues to hold its proper place, whether in regard to the number of Students it sends forward to graduate, or in reference to the positions they yearly obtain in the intellectual struggles for honors and exhibitions, with the able and well-trained Students of Cork and Galway.

In reference to the Queen's University itself, I may remark that its influence on this and the other Queen's Colleges has been very powerful and beneficial. From the moment of his matriculation the Student has before his mind the requirements, the honors, and distinctions of the Queen's University. Stimulated by these, he presses onward till he obtains the objects of his ambition at his first and final examination in Dublin. The calendar of the Queen's University affords abundant testimony to its rapidly increasing expansion, and the values attached to the degrees and honors which it confers on its graduates.

I have to report that the scholarships attached to the Belfast College continue to be awarded strictly on the ground of merit alone. The competition for these scholarships, both junior and senior, are of a very testing character in regard to the positive and comparative merits of the aspirants to these collegiate honours. To carry success, every Student, from the breaking up of the College in July till its reopening in October must, with untiring zeal and energy prosecute his work, in order to retain yearly his collegiate rank. I am certain that the scholarship organization and arrangement in the Queen's Colleges, making work and merit essential from the first to the last of the collegiate courses, has tended mightily to raise the standard of thought and education in Ireland, whilst laying the best foundation for beneficial services in all the departments of society and of the State.

I trust I may not be regarded as overstepping the limits of my jurisdiction and responsibility if I record, in this report, a very strong expression of opinion in favour of the fundamental principles of united education on which the Queen's Colleges were founded. In Belfast College, its perfect practicability and advantage have been established. The authorities, the professors, the students, the officers of the College, are of different denominations, and I have never known the slightest discordance on religious grounds to exist within its walls. On the contrary, we imbibe those feelings of mutual respect and forbearance which are the best preparations for united action in the mixed society around, and whilst attached each to his own religious faith, we learn by daily intercourse, freely to grant to others what we individually claim. Any attempt to subvert or undermine a system founded on the broad principles of progress, co-operation, and enlightenment, cannot be regarded with approbation by the community at large. The great duty of consolidating and combining all the interests of the State demands, union, not separation.

Some violations of discipline attracted the notice of the Council, who inflicted such punishment on the offenders as appeared to them suitable.

The subjoined tabular returns will present a condensed view of the condition of the College from the date of its inauguration in 1849-50 to the close of the Session ending July, 1870.

[TABLE.

I.—NUMBERS and RELIGIOUS PERSUASIONS of STUDENTS attending Lectures in QUEEN'S COLLEGE, BELFAST, in each Session from its opening.

SESSIONS.	Matriculated.	Non-Matriculated.	Total.	Church of Ireland.	Roman Catholic.	Presbyterian.	Methodist.	Independent.	Various.	Total.
1849–50, . .	90	105	195	33	5	145	4	1	7	195
1850–51, . .	110	75	185	33	10	136	4	1	1	185
1851–52, . .	120	69	189	40	14	129	5	–	1	189
1852–53, . .	101	53	154	33	15	100	4	–	2	154
1853–54, . .	114	54	168	36	14	107	6	–	5	168
1854–55, . .	118	65	183	34	14	131	3	–	1	183
1855–56, . .	119	74	193	33	19	131	5	2	3	193
1856–57, . .	136	58	194	35	14	131	3	2	9	194
1857–58, . .	153	54	207	31	14	154	4	1	3	207
1858–59, . .	160	63	223	45	14	153	8	2	1	223
Average of first 10 years,	122·1	67	189·1	35·3	13·3	131·7	4·6	·9	3·3	189·1
1859–60, . .	199	58	257	43	16	184	8	2	4	257
1860–61, . .	239	73	312	57	22	216	7	–	10	312
1861–62, . .	299	76	375	59	17	266	13	4	16	375
1862–63, . .	335	53	388	61	24	275	11	3	14	388
1863–64, . .	340	47	387	63	26	261	10	3	24	387
1864–65, . .	356	49	405	58	22	285	9	1	30	405
1865–66, . .	360	53	413	60	19	281	13	2	38	413
1866–67, . .	357	30	387	57	19	235	10	1	67	387
1867–68, . .	357	33	390	59	16	233	25	2	55	390
1868–69, . .	330	38	368	51	15	220	26	2	54	368
Average of second 10 years,	317·2	51	368·2	56·8	19·6	244·6	14·0	2·0	31·2	368·2
1869–70, . .	328	25	353	57	10	214	19	3	42	353

II.—NUMBERS and RELIGIOUS PERSUASIONS of STUDENTS who have entered QUEEN'S COLLEGE, BELFAST, in each year since its opening.

SESSIONS.	Matriculated.	Non-Matriculated.	Total.	Church of Ireland.	Roman Catholic.	Presbyterian.	Methodist.	Independent.	Various.	Total.
1849–50, . .	90	105	195	33	5	145	4	1	7	195
1850–51, . .	51	42	93	15	7	68	1	–	2	93
1851–52, . .	42	40	82	25	7	47	2	–	1	82
1852–53, . .	31	23	54	16	7	28	2	–	1	54
1853–54, . .	39	23	62	14	5	36	3	–	4	62
1854–55, . .	41	38	79	13	6	56	2	–	2	79
1855–56, . .	33	29	62	17	5	36	2	2	–	62
1856–57, . .	40	28	68	18	4	40	1	–	5	68
1857–58, . .	43	28	71	8	6	55	2	–	–	71
1858–59, . .	51	37	88	24	8	51	4	1	–	88
Entered first 10 years,	461	393	854	183	60	562	23	4	22	854
1859–60, . .	66	24	90	14	6	64	4	–	2	90
1860–61, . .	96	41	137	29	13	85	3	–	7	137
1861–62, . .	114	38	152	27	5	101	6	3	10	152
1862–63, . .	115	22	137	23	12	92	5	–	5	137
1863–64, . .	109	18	127	25	5	86	3	–	7	127
1864–65, . .	108	27	135	22	6	97	3	–	7	135
1865–66, . .	88	30	118	17	7	83	5	–	6	118
1866–67, . .	95	12	107	16	6	61	10	–	14	107
1867–68, . .	90	22	112	20	5	63	1	1	22	112
1868–69, . .	79	24	103	16	7	60	6	2	12	103
Total entries in 20 years,	960	258	1,218	209	72	792	46	7	92	1,218
1869–70, . .	03	15	98	23	0	54	4	1	8	98
	1,504	666	2,170	415	140	1,408	73	12	122	2,170

---

* Of the 666 who entered as non-matriculated Students, 127 afterwards passed a matriculation examination. The College Register contains 1,631 matriculated and 539 non-matriculated, in all 2,170 students.

III.—Return showing the Number of Students attending the Lectures of each Professor in each year since the opening of the College.

Professor of	1849-50.	1850-51.	1851-52.	1852-53.	1853-54.	1854-55.	1855-56	1856-57	1857-58.	1858-59.	1859-60	1860-61.	1861-62	1862-63	1863-64	1864-65.	1865-66.	1866-67	1867-68.	1868-69.	1869-70.
Greek,	71	74	48	28	32	38	43	86	44	58	77	100	140	157	120	133	118	74	72	73	64
Latin,	63	72	44	25	32	35	40	29	44	54	72	94	139	149	113	118	112	96	86	89	87
Mathematics,	56	70	51	36	42	44	45	52	55	62	78	95	109	122	111	113	98	80	64	97	84
English,	52	46	53	35	44	44	51	43	56	65	78	100	116	135	123	128	113	102	91	91	86
Modern Languages,	62	56	41	31	34	52	43	52	56	63	76	150	177	160	125	146	151	150	142	128	137
Celtic,	The Lectures open to the public.														Vacant						
Natural Philosophy,	43	48	61	29	40	38	35	37	48	34	46	95	95	104	106	102	116	113	108	149	–
Natural History,	12	49	75	52	58	68	58	65	62	37	84	77	77	88	112	121	101	87	118	105	88
Mineralogy,	–	6	14	13	15	13	9	20	18	11	16										
Logic & Metaphysics,	2	–	45	39	44	45	43	51	46	54	44	78	106	114	103	81	116	101	81	81	89
Chemistry,	40	56	75	53	62	70	60	76	68	88	99	52	106	101	104	122	104	127	122	122	106
Engineering,	10	13	15	3	12	12	8	17	16	11	16	14	18	25	30	31	20	27	24	28	25
Agriculture & Medical Jurisprudence,	13	21	24	14	22	17	18	20	25	22	27	21	24	22	– 25	– 30	– 30	– 35	– 33	– 35	– 34
Anatomy,	35	44	55	61	53	63	65	46	52	88	81	101	107	105	114	133	136	155	158	167	151
Medicine,	9	17	17	12	15	18	33	27	19	22	29	25	42	27	36	44	48	67	69	57	61
Surgery,	24	15	26	29	20	53	48	32	30	29	39	51	53	54	47	50	55	77	79	75	63
Midwifery,	14	13	12	16	17	13	24	13	7	17	14	26	36	22	34	15	23	38	37	48	38
Materia Medica,	11	14	16	17	17	23	25	11	16	22	27	23	38	37	29	38	47	47	58	46	51
English Law,	17	16	17	15	11	15	10	14	12	13	11	16	14	12	12	14	19	13	20	17	23
Jurisprudence,	11	11	23	10	13	11	15	12	27	20	23	13	20	29	27	31	34	28	24	29	33

This return is given more fully in detail in the Appendix, pp. 12, 13.

The return of Lectures delivered in each Session appears in pp. 18, 19 of the Appendix.

IV.—Return of the Number of Medical Students in attendance in each Session.

Session	Matriculated.	Non-Matriculated.	Total.	Session.	Matriculated.	Non-Matriculated.	Total.
1849–50,	28	27	55	1860–61,	70	46	116
1850–51,	20	35	55	1861–62,	81	48	129
1851–52,	25	39	64	1862–63,	89	33	122
1852–53,	29	33	62	1863–64,	110	33	143
1853–54,	29	37	66	1864–65,	126	25	151
1854–55,	39	36	75	1865–66,	130	29	159
1855–56,	33	48	81	1866–67,	157	17	174
1856–57,	36	25	61	1867–68,	163	18	181
1857–58,	35	32	67	1868–69,	150	24	174
1858–59,	45	34	79	1869–70,	145	22	167
1859–60,	56	39	95				

Various and full returns of the number of students in each class, of the amount of fees paid over to each Professor by the Bursar, of the number of Lectures delivered from each Chair, together with the accounts of expenditure, and enlarged digest of the subjects taught in each class, and copies of the printed papers used at the different examinations will be found given at full length in the Appendix.

All of which, on behalf of the College, is testified by your Majesty's most dutiful servant,

P. SHULDHAM HENRY,
President.

Queen's College, Belfast,
30th June, 1871.

APPENDIX.

APPENDIX, No. 1.

Appendix.
No. 1.

Queen's College, Belfast, and Queen's University.

Queen's College, Belfast, and Queen's University.

The College is a Corporation under the name and style of "Queen's College Belfast." It was founded under the provisions of the Act 8 & 9 Victoria, cap. 66, intituled "An Act to enable Her Majesty to endow new Colleges for the Advancement of Learning in Ireland." Under the powers given by this Act, it was determined to found three Colleges. Belfast, Cork, and Galway, were selected as the sites of these Colleges, and on the 30th day of December, 1845, letters patent were issued, incorporating them. The Presidents and Vice-Presidents of the three Colleges were formed into a Board, called "The Board of Queen's Colleges," for the purpose of drawing up the statutes and arranging the system of education to be pursued in them.

On the 4th of August, 1849, the Professors were appointed, and the Colleges opened for the reception of students on the 30th October, in the same year.

Letters patent, constituting the statutes, were issued on the 11th of December, 1849, and a further charter was issued in the year 1863.

The Council of the College.

The President.
The Vice-President.
P. Redfern, M.D., Professor of Anatomy.
J. Purser, M.A., Professor of Mathematics.
W. Nesbitt, M.A., Professor of Latin.
J. Cuming, M.D., Professor of Medicine.
C. MacDouall, LL.D., Professor of Greek.
James Thomson, LL.D., Professor of Civil Engineering.

Professors.

The Greek Language, . .	Charles MacDouall, LL.D., M.R.A.S.
The Latin Language, . .	William Nesbitt, M.A.
History and English Literature,	Charles Duke Yonge, B.A. Oxon.
Modern Languages, . .	A. L. Meissner, PH.D.
Mathematics, . . .	John Purser, M.A., M.R.I.A.
Natural Philosophy, . .	Joseph David Everett, M.A., D.C.L.
Chemistry, ...	Thomas Andrews, M.D., F.R.S., M.R.I.A.
Natural History, . . .	Wyville Thomson, LL.D., F.R.S.
Logic and Metaphysics, .	John Park, M.A.
Civil Engineering, . .	James Thomson, LL.D., M.I.C.E.I.
Agriculture, ...	John F. Hodges, M.D., F.C.S.
Anatomy and Physiology, .	Peter Redfern, M.D. Lond., F.R.C.S.
Practice of Medicine, . .	James Cuming, M.D.
Practice of Surgery, . .	Alexander Gordon, M.D.
Materia Medica, . . .	James Seaton Reid, M.D.
Midwifery, ...	R. F. Dill, M.D.
English Law, . . .	Echlin Molyneux, A.M.
Jurisprudence and Political Economy, . . .	T. E. Cliffe Leslie, LL.B.

Appendix, No. 1.

Queen's College, Belfast, and Queen's University.

OFFICE BEARERS.

Curator of Museum, . .	The Professor of Min., Geo., and Nat. Hist.
Registrar, ...	Rev. Richard Oulton, B.D.
Librarian, ...	Rev. George Hill.
Bursar, ...	Alexander Dickey, Esq.

DEANS OF RESIDENCES.

United Church of England and Ireland, . . .	Rev. Edward N. Hoare, A.B.
General Assembly of the Presbyterian Church in Ireland,	Rev. Josias Leslie Porter, D.D., LL.D.
Irish Association of Non-Subscribing Presbyterians, .	Rev. John Porter.
Wesleyan Methodists, . .	Rev. William Arthur, M.A.

The students of the College are either Matriculated or Non-matriculated. All the courses for Matriculated students in Arts, including the Department of Civil Engineering, and also in the Faculties of Medicine and of Law, will be found in the Calendar, which is published annually.

Non-matriculated students, on paying the regulated class fees, and signing an engagement to observe order and discipline in the College, are permitted, without undergoing a preliminary examination, to attend any separate course or courses of Lectures; but are not permitted to become candidates for Scholarships or Prizes, or to enjoy other privileges of the Matriculated students.

Students in any of the Faculties can be admitted *ad eundem* from the other Queen's Colleges, or from any University capable of granting degrees.

COLLEGIATE SCHOLARSHIPS.

In the FACULTY OF ARTS—30 Junior Scholarships, of £24 each, are awarded to Undergraduates—15 for proficiency in Literature, and 15 for proficiency in Science; also, 8 Senior Scholarships, of £40 each, to Graduates, one being limited to students who have also completed the course for the degree of LL.B.; and 5 Scholarships, of £20 each, to Engineering Students.

In the FACULTY OF MEDICINE—8 Junior Scholarships, of £25 each, are awarded.

In the FACULTY OF LAW—3 Junior Scholarships, of £20 each, are awarded.

SCHOLARSHIPS AWARDED IN THE SEVERAL FACULTIES, 1868-69.

8 Senior Scholarships awarded.
19 Junior Scholarships in Arts awarded.
5 Engineering Scholarships.
8 Medical Scholarships.
4 Law Scholarships.

1869-70.

7 Senior Scholarships awarded.
19 Junior Scholarships in Arts awarded.
4 Engineering Scholarships.
8 Medical Scholarships.
4 Law Scholarships.

By an order of Her Majesty in Council, of 21st May, 1855, applying to the Civil Service, it is ordained that "every person nominated to a junior situation should obtain a certificate of qualification before entering on his duties." The ordinary classes in Queen's College embrace the branches required in the Examinations for the Civil Service, and also in the Examination for students intending to become candidates for commissions in the Royal Artillery and Engineers, and for appointments to the Civil Service of India, both of which are now thrown open to public competition.

QUEEN'S UNIVERSITY IN IRELAND

Appendix,
No. 1.

Queen's College, Belfast, and Queen's University.

The charter founding the Queen's University in Ireland received the Royal sanction in the year 1850, and it provides that its Senate should have the power of conferring upon the students of the Queen's Colleges of Belfast, Cork, and Galway, such degrees and distinctions, in the Faculties of Arts, Law, and Physic, as are granted and conferred in other Colleges and Universities of Great Britain and Ireland. It further ordains that any of the students of the three Queen's Colleges, who shall have obtained such degrees in any of the several Faculties of Arts, Medicine, and Law, as shall be conferred by the Chancellor and Senate of the Queen's University, shall be fully possessed of all such rights, privileges, and immunities, as belong to similar degrees granted by other Universities or Colleges, and shall be entitled to whatever rank and precedence is derived from similar degrees granted by other Universities.

By the charter of the Queen's University, candidates for Degrees in Medicine are required to have attended *at least two courses of Medical Lectures* in some one of the Queen's Colleges. For the remainder of the courses of Medical Lectures, authenticated certificates will be received from the Professors or Lecturers in Universities, Colleges, or Schools, recognised by the Senate of the Queen's University in Ireland.

The Chancellor and Senate also have the power of admitting, by special grace, Graduates of other Universities to similar and equal degrees.

In order to obtain a degree or diploma in the Queen's University it is necessary to enter the College as a Matriculated Student, to pass the entrance or Matriculation Examination, and to pursue a fixed course of study.

The Matriculated Students may be classified as follow:—

I. Those intending to proceed to the Degrees of A.B. and A.M.
II. „ „ Degree of M.D.
III. „ „ Diploma of Elementary Law.
IV. „ „ Degrees of LL.B. and LL.D.
V. „ „ Diploma of Civil Engineering.
VI. „ „ Diploma of Surgery.

THE SENATE.

Chancellor.—The Most Honorable the Marquess of Kildare, M.A. (Oxon.)
Vice-Chancellor.—Sir Dominic J. Corrigan, Bart., M.D., M.P., Physician in Ordinary to the Queen in Ireland.
The Right Hon. David R. Pigot, Lord Chief Baron of the Exchequer, M.R.I.A., &c.
The Rev. P. Shuldham Henry, D.D., M.R.I.A., President Queen's College, Belfast.
Sir Robert Kane, F.R.S., M.R.I.A., &c., President Queen's College, Cork.
Edward Berwick, B.A., President Queen's College, Galway.
Sir Richard Griffith, Bart., LL.D., M.R.I.A., Commissioner of Public Works.
Major-General Sir Thomas Askew Larcom, R.E., K.C.B., LL.D., F.R.S., M.R.I.A., &c.
James Gibson, A.M., Q.C., M.R.I.A., Barrister-at-Law.
The Right Hon. James Henry Monahan, Lord Chief Justice of the Common Pleas.
Robert Adams, A.M., M.D., F.R.C.S.
The Right Honorable Sir Robert Peel, Bart., M.P.
The Right Reverend the Lord Bishop of Killaloe, D.D.
His Grace the Archbishop of Dublin.
Thomas A. Shillington, Esq., J.P.
The Right Honorable the Earl of Dunraven and Mount-Earl, K.P.
The Lord Talbot de Malahide, F.R.S., P.R.I.A.
The Lord Clermont, D.L.
Right Honorable William Monsell, M.P.
Right Honorable Thomas O'Hagan, Lord Chancellor of Ireland.
William K. Sullivan, esq., PH.D.
David Ross, M.A., LL.B.
William MacCormac, M.A., M.D.
Thomas William Moffett, LL.D.
Secretary.—G. Johnstone Stoney, M.A.—Office, Dublin Castle.

The Senate holds its sitting in Dublin Castle, where the examinations of the students of the three Colleges, for Graduation and University Exhibitions, are annually conducted by Examiners appointed by the Senate from year to year.

APPENDIX, No. 2.

Return of the Number of Students attending each Class in the Queen's College, Belfast, in each Year.

Class.	Session.									
	1849-50.	'50-51.	'51-52.	'52-53.	'53-54.	'54-55.	'55-56.	'56-57.	'57-58.	'58-59.
Greek—1st year,	71	47	28	16	21	26	29	24	31	36
,, 2nd ,,	–	27	18	7	11	12	14	12	13	17
,, Higher,	–	–	–	–	–	–	–	–	–	5
Latin—1st year,	63	45	27	19	21	24	27	19	33	34
,, 2nd ,,	–	27	17	6	11	11	13	10	11	18
,, Higher,	–	–	–	–	–	–	–	–	–	2
The English Language,	52	46	28	20	24	28	31	24	36	41
History and English Literature,	–	–	25	15	20	18	20	19	20	21
Senior ,, ,,										
Modern Languages (French, German, Italian).	62	36	41	27	34	37	29	40	40	50
Senior ,,	–	20	28	16	15	15	19	12	16	13
The Celtic Languages,	*The Lectures in each Session open to the Public.*							–	–	–
Mathematics—1st year,	86	58	40	25	29	33	30	35	39	45
,, 2nd ,,	–	12	11	11	13	11	15	17	16	14
,, Higher,	–	–	–	–	–	–	–	–	–	4
Nat. Philosophy—Higher Class.	–	–	–	–	–	6	6	8	7	4
,, Mathematical Physics, &c.	32	32	46	24	29	23	24	19	26	25
,, Experimental Physics,	48	59	57	29	40	34	36	37	41	28
,, Practical Mechanics,	7	3	6	3	4	3	3	2	–	–
Natural Philosophy applied,	–	–	–	–	–	–	–	–	7	3
Chemistry,	37	53	63	44	51	60	50	70	69	74
Practical Chemistry,	6	7	14	10	15	14	12	10	11	14
Laboratory,	–	6	8	8	9	9	10	15	10	11
Zoology,	12	34	35	29	31	43	31	43	34	63
Botany,	12	49	46	35	37	46	36	44	34	62
Physical Geography,	–	–	29	17	21	19	20	21	28	23
Logic,	3	–	27	17	21	26	20	27	22	29
Metaphysics,	–	–	18	15	16	11	17	20	15	19
Higher Logic and Metaphysics,	–	–	6	7	7	8	8	7	9	8
Mineralogy and Geology,	*Public.*	6	14	13	15	13	9	20	13	11
Surveying,	10	9	9	6	6	9	4	–	–	7
Civil Engineering,	–	4	6	3	4	3	4	17	14	3
Theory of Agriculture,	11	8	7	2	6	5	5	4	7	7
Practice of Agriculture,	–	5	3	2	5	5	1	1	3	1
Diseases of Farm Animals,	–	5	3	2	5	5	1	1	4	2
Medical Jurisprudence,	2	8	14	10	13	8	10	15	16	13
Anatomy,	25	36	48	45	44	51	44	39	39	59
Practical Anatomy,	27	32	35	49	41	46	53	33	41	44
Practice of Medicine,	9	17	17	12	15	18	33	27	19	22
Practice of Surgery,	24	15	26	29	28	30	48	32	30	29
Materia Medica,	11	14	16	17	17	23	25	11	18	22
Midwifery,	14	10	12	16	17	18	24	13	7	17
Law of Property, Equity of Bankruptcy, Common and Criminal Law, Evidence and Pleading,	17	16	17	15	11	5	10	14	12	13
Jurisprudence and Political Economy, Arts,	–	–	12	2	9	6	8	2	18	9
Civil Law, Constitutional, Colonial, and International Law, Jurisprudence,	11	11	13	8	10	5	9	10	10	11
Arabic,	–	–	–	–	–	–	–	–	–	–
Hindustani,	–	–	–	–	–	–	–	–	–	–
Sanskrit,	–	–	–	–	–	–	–	–	–	–

Appendix, No. 2—*continued.*

Return of the Number of Students attending each Class in the Queen's College, Belfast, in each Year—*continued.*

Class.	Session.										
	'59-60.	'60-61.	'61-62.	'62-63.	'63-64.	'64-65.	'65-66.	'66-67	'67-68.	'68-69.	'69-70.
Greek—1st year,	45	69	81	83	68	79	63	49	47	43	41
,, 2nd ,,	23	25	49	63	44	40	49	21	19	24	11
,, Higher,	4	4	7	7	9	12	6	4	5	8	7
Latin—1st year,	48	89	84	83	65	78	64	50	48	43	44
,, 2nd ,,	22	23	49	60	40	33	44	40	34	37	32
,, Higher,	3	2	6	8	8	7	4	8	7	9	11
The English Language,	49	72	85	85	70	80	67	49	46	43	45
History,	24	28	5	8	6	4	4	5	9	6	16
English Literature,			30	41	52	48	42	52	41	32	35
Modern Languages (French, German, Italian),	76	140	124	110	99	110	115	109	115	96	94
Senior ,,	17	10	54	43	26	36	36	46	33	32	52
The Celtic Languages,	*The Lectures in each Session open to the Public.*							–	–	–	–
Mathematics—1st year,	61	83	93	102	85	92	75	62	58	66	57
,, 2nd ,,	13	13	13	15	20	17	19	12	22	24	22
,, Higher,	6	3	–	5	6	4	4	6	33	7	8
Nat. Philosophy—Higher Class,	9	–	–	–	–	5	4	–	9	5	7
,, Mathematical Physics, &c.	24	64	87	72	69	60	68	56	51	48	52
,, Experimental Physics,	42	87	86	94	95	87	120	104	90	85	78
Natural Philosophy applied,	4	4	–	2	5	6	7	4	6	10	5
Chemistry,	81	64*	89	89	81	93	95	91	84	96	84
Practical Chemistry,	21	21	20	24	28	44	37	44	51	44	30
Laboratory,	10	12	15	15	8	14	16	16	16	17	15
Zoology,	56	37*	57	68	90	82	84	92	83	75	–
Botany,	55	40*	56	62	90	92	27	50	51	60	–
Physical Geography,	28	30	7†	7	–	–	–	–	–	–	–
Logic,	29	35	65	66	57	49	68	52	43	46	38
Metaphysics,	15	24	22	34	40	40	41	39	29	33	30
Higher Logic,	–	–	10	12	25	14	24	33	22	21	15
Mineralogy and Geology,	18	7‡	11	10	12	14	15	5	11	6	10
Engineering, 1st year,	12	9	10	11	15	15	14	12	8	13	11
Engineering, 2nd year, lectures,	4	4	6	11	8	12	10	8	10	4	9
Engineering, 2nd year, practice,						12	9	8	10	4	9
Engineering, 3rd year, lectures,	–	–	–	3	7	7	7	7	6	9	5
Engineering, 3rd year, practice,						7	7	5	6	10	5
Theory of Agriculture,	7	6	6	6	–	–	–	–	–	–	–
Practice of Agriculture,	4	3	1	–	–	–	–	–	–	–	–
Diseases of Farm Animals,	3	2	1	–	–	–	–	–	–	–	–
Medical Jurisprudence,	17	14	18	16	25	30	28	35	33	35	34
Anatomy,	60	88	83	83	87	99	109	127	120	130	117
Practical Anatomy,	62	80	85	91	96	126	124	149	159	160	140
Practice of Medicine,	29	25	42	27	36	44	48	87	70	57	59
Practice of Surgery,	39	51	53	53	46	48	55	77	81	75	61
Materia Medica,	27	23	38	37	29	38	47	47	38	48	38
Midwifery,	14	26	36	22	34	19	23	36	37	48	41
Law of Property,	16	16	14	12	12	14	19	13	20	17	24
Equity and Bankruptcy,											
Common and Criminal Law,											
Evidence and Pleading,											
Political Economy, Arts,	7	10	8	18	17	20	15	18	8	10	14
Civil Law; Constitutional, Colonial, and International Law; Jurisprudence,	17	10	12	11	10	11	19	11	16	19	20
Arabic,	1	–	–	–	–	–	–	–	–	–	–
Hindustani,	2	3	2	3	–	–	–	–	–	–	–
Sanskrit,	6	3	4	5	4	4	–	–	–	–	–
Operative Surgery,	–	–	–	11	2	–	16	23	12	10	17

---

* No Arts Students this Session, owing to change of Statutes.

† Not now required in third year Arts.

‡ No Engineering Students this Session, owing to change of Statutes.

APPENDIX,

RETURN of the AMOUNT of FEES received by each

Professor of	1849-50.		1850-51.		1851-52.		1852-53.		1853-54.		1854-55.		1855-56.		1856-57.		1857-58.	
	£	s.	£	s.	£	s.	£	s.	£	s.	£	s.	£	s.	£	s.	£	s.
Greek, . . .	*88	10	83	0	50	0	27	5	38	5	46	5	51	15	44	15	51	0
Latin, . . .	*73	15	79	0	50	10	31	5	30	5	44	5	47	15	39	15	53	0
English History and Literature, . .	50	5	50	5	47	10	31	5	43	5	45	5	59	5	48	15	57	10
Logic & Metaphysics,	6	0	–		† 59	5	34	5	37	15	41	0	41	15	48	5	46	15
Mathematics, . .	116	15	97	10	69	15	43	0	54	10	59	0	60	10	62	15	69	10
Natural Philosophy,	79	5	70	15	99	10	47	0	73	15	76	15	59	10	62	15	72	0
Chemistry, . Practical Chemistry	85	5	104	0	117	5	91	10	111	10	131	15	105	10	133	0	113	10
Anatomy and Physiology, . Practical Anatomy,	143	0	170	0	195	15	230	10	228	0	250	0	256	0	181	0	206	0
Natural History and Botany, . .	20	10	69	0	70	15	50	15	55	0	76	15	59	10	56	0	52	10
Modern Languages,	97	0	84	0	63	0	50	0	61	0	85	0	74	0	86	0	96	0
Mineralogy and Geology, . .	–		7	10	24	15	17	15	20	15	18	0	12	10	37	0	20	5
Jurisprudence and Political Economy,	20	0	21	0	35	15	18	15	28	0	14	10	20	5	22	10	31	15
English Law, .	32	0	29	0	37	0	23	0	20	0	16	0	21	0	27	0	21	0
Civil Engineering, .	16	0	24	10	22	0	14	0	17	15	21	0	13	10	27	0	22	0
Agriculture and Medical Jurisprudence,	15	10	41	0	49	5	22	0	46	0	32	15	26	0	25	10	40	5
Practice of Medicine,	17	0	31	0	32	0	18	0	30	0	30	0	56	0	43	10	26	0
Surgery, . . .	41	0	21	10	36	0	51	0	43	0	43	0	74	0	42	10	34	0
Materia Medica, .	22	0	28	0	26	0	29	0	33	0	43	0	45	0	20	0	34	0
Midwifery, . . .	28	0	18	0	22	0	27	0	31	0	33	0	44	0	24	0	12	0
Teacher of Drawing,	–		–		–		–		–		–		–		32	0	25	0

* In the Session of 1849-50, Medical Students were required to attend the Greek and Latin Classes, but have since been exempt from attending either class.

† Professor M'Cosh was appointed in Session 1851-52, and taught and received fees from Students properly belonging to the previous Session.

Queen's College, Belfast, May, 1871.

Appendix, No. 4.

Expenditure of One Year's Additional Grant.

APPENDIX,

ACCOUNT of the EXPENDITURE of ONE YEAR'S ADDITIONAL GRANT

1. Library of Ancient and Modern Literature and Philology:

	£	s.	d.
Ancient Classical Languages and Philology, . . .	20	3	11
English History and Literature, ...	24	19	5
Foreign Modern Languages, ...	14	1	4
Works of General Interest, &c., ...	77	4	1
	136	8	9

2. Libraries, Museum, &c., Mathematical, Physical, and Chemical Sciences:

	£	s.	d.
Mathematical and Physical Libraries, ...	35	11	11
Chemical Library, ...	17	12	11
Museum and Cabinet of Physical Science, . . .	75	3	0
,, Laboratory, Chemical Science, . . .	24	13	3
	153	1	1

No. 3.

Professor in the Queen's College, Belfast, in each Year.

1858-59.		1859-60.		1860-61.		1861-62.		1862-63.		1863-64.		1864-65.		1865-66.		1866-67.		1867-68.		1868-69.		1869-70.	
£	s.	£	s.	£	s.	£	s.	£	s.	£	s.	£	s.	£	s.	£	s.	£	s.	£	s.	£	s.
78	0	*93	5	*131	15	*186	0	*187	15	*221	0	233	10	212	0	131	0	121	0	127	0	109	0
67	0	†90	0	127	15	185	0	185	15	211	0	220	10	202	0	167	0	152	0	155	0	154	0
69	0	94	15	117	5	155	10	164	5	163	10	162	10	131	10	143	10	130	10	107	10	121	0
68	10	39	0	58	10	106	5	134	10	173	10	143	0	183	10	184	10	140	10	139	10	117	0
97	10	139	10	156	0	103	5	211	5	201	0	208	0	173	0	143	0	135	0	132	0	148	0
66	10	61	5	180	10	178	15	194	10	183	0	186	0	208	0	198	0	192	0	183	0	177	0
147	5	184	0	167	0	195	15	210	5	213	10	294	10	252	0	277	10	299	0	284	10	249	10
262	10	307	0	427	10	‡432	10	‡425	10	‡453	10	567	10	544	0	643	14	652	8	731	18	592	1
105	5	94	10	70	0	96	10	120	5	157	0	170	0	144	0	154	0	185	0	133	0	104	0
120	0	159	10	277	0	319	5	270	15	231	0	278	0	247	0	268	0	280	0	245	0	255	0
21	15	24	15	11	10	16	5	20	10	22	0	25	0	24	0	9	0	20	0	7	0	16	0
28	10	36	10	28	10	25	15	37	10	38	0	51	0	51	0	46	0	37	0	40	0	56	0
25	0	28	0	28	0	25	0	21	0	18	0	20	0	25	0	23	0	35	0	31	0	43	0
22	15	24	15	32	0	40	15	70	0	02	0	97	0	79	0	60	0	70	0	78	0	66	0
31	5	47	0	43	0	§44	0	§36	15	48	0	55	0	48	0	67	0	63	0	68	0	61	0
37	0	44	0	37	0	64	10	46	0	59	0	74	0	77	0	103	0	103	0	92	0	96	0
46	0	65	10	79	13	84	12	96	11	73	0	82	0	94	0	137	0	144	0	131	0	115	0
39	0	50	0	60	0	69	0	70	0	59	0	73	0	83	0	86	0	71	0	89	0	73	0
28	0	25	0	48	0	63	0	36	0	60	0	36	0	42	0	64	0	72	0	03	0	78	0
26	0	22	0	–		–		–		–		–		–		–		–		–		–	

---

* Besides for Sanskrit and Hindustani, 1059-60, £35; 1060-61, £22 10*s.*; 1861-62, £25; 1862-63, £32 10*s.*; 1863-64, £20; 1864-5, £20.

† Besides for Arabic in 1859-60, £5.

‡ The Professor of Anatomy pays to his Demonstrator a portion of the fees for Practical Anatomy.

§ No endowment for Medical Jurisprudence. Professor Hodges delivers the lectures, receiving only class fees.

ALEXANDER DICKEY, *Bursar.*

No. 4.

Appendix, No. 4.

Expenditure of One Year's Additional Grant.

to the Queen's College, Belfast, ending 31st March, 1869.

3. Libraries, Museum, and Collection of Objects of the Department of the Natural Sciences:

	£	s.	d.
Library of Natural History, and Geology and Mineralogy,	20	18	4
Museum of Natural History, and Geology and Mineralogy,	99	5	4
	120	3	8

4. Libraries, Museums, and Collections of Objects of the Department of Engineering:

Library of Engineering,	12	5	1
Instruments and Collections of Engineering,	8	4	6
	20	9	7

Appendix, No. 4.

APPENDIX, No. 4—*continued.*

Expenditure of One Year's Additional Grant.

ACCOUNT of the EXPENDITURE of ONE YEAR'S ADDITIONAL GRANT to the Queen's College, Belfast, ending 31st March, 1869—*continued*.

	£	s.	d.
5. Museum and Library of Medical Science:			
Library of Medical Works,	45	0	6
Anatomical and Pathological Museums, &c.,	55	18	2
Surgical Museum,	9	7	0
Medical Jurisprudence,	7	2	8
	117	8	4
6. Library of Metaphysical, Legal, and Economical Science:			
Law, Jurisprudence, and Political Economy,	35	8	0
Metaphysics,	20	12	1
	56	0	1
7. Printing, Stationery, Advertising, Postages, Office Expenses, &c.,	265	3	7
8. Heating and Lighting,	161	18	2
9. Grounds,	81	14	0
Balance in Bank of Ireland Office, 31st March, 1869,	371	16	11
Total,	1,484	4	2

	£	s.	d.
Amount of One Year's additional Grant,	1,000	0	0
College and Matriculation Fees,	112	0	0
Calendars,	5	2	0
Balance in Bank, 31st March, 1868,	367	2	2
Total,	1,484	4	2

The Accounts of the College up to 31st March, 1869, have been examined and found correct by the Commissioners for Auditing the Public Accounts.

May, 1871.

ALEXANDER DICKEY, *Bursar.*

General Class Examinations, Queen's College, Belfast.

—	Session 1868–69.			A.M.	P.M.	Session 1869–70.			A.M.	P.M.
The English Language,	Saturday,	January	9	—	12—4	Saturday,	January	8	—	12—4
Logic,	Saturday,	February	6	9—12	—	Saturday,	February	5	9—12	—
Mineralogy and Geology, and Physical Geography,	Thursday,	February	25	10—1	—	Friday,	February	25	10—1	—
Zoology,	Saturday,	February	27	9—12	—	Saturday,	February	26	10—1	—
Metaphysics,	Tuesday,	March	23	9—12	and 2—5	Tuesday,	April	12	9—12	and 2—5
English Literature,	Wednesday,	March	24	9—12	and 2—5	Wednesday,	April	13	9—12	and 2—5
History,	Thursday,	March	25	9—12	—	Thursday,	April	14	—	2—5
Practical Anatomy,	Saturday,	April	17	9—12	—	Saturday,	April	16	9—12	—
Midwifery,	Tuesday,	April	27	9—12	—	Wednesday,	April	27	9—12	—
Anatomy and Physiology,	Wednesday,	April	28	—	2—5	Thursday,	April	28	—	2—5
Practice of Medicine,	Tuesday,	April	27	9—12	and 2—5	Friday,	April	29	9—12	and 2—5
Materia Medica,	Thursday,	April	29	9—12	—	Friday,	April	29	9—12	—
Practice of Surgery,	Thursday,	April	29	—	2—5	Friday,	April	28	—	2—5
Medical Jurisprudence,	Friday,	April	30	—	2—5	Saturday,	April	30	9—12	—
Natural Philosophy,	Saturday,	June	5	9—12	and 2—5	Saturday,	June	4	9—12	and 2—5
Greek (First Year),	Wednesday,	June	2	9—12	,, 2—5	Wednesday,	June	1	9—12	,, 2—5
,, (Second Year),	Thursday,	June	3	9—12	,, 2—5	Thursday,	June	2	9—12	,, 2—5
Latin (First Year),	Thursday,	June	3	9—12	,, 2—5	Thursday,	June	2	9—12	,, 2—5
,, (Second Year),	Wednesday,	June	2	9—12	,, 2—5	Wednesday,	June	1	9—12	,, 2—5
Engineering, 1st, 2nd, and 3rd years,	Thursday,	June	3	9—12	,, 2—5	Thursday,	June	2	9—12	,, 2—5
Office and Fieldwork,	Wednesday,	June	2	—	2—5	Wednesday,	June	1	—	2—5
Mathematics,	Friday,	June	4	9—12	,, 2—5	Friday,	June	3	9—12	and 2—5
Modern Languages,	Tuesday,	June	1	9—12	,, 2—5	Tuesday,	May	31	9—12	,, 2—5
Chemistry,	Monday,	June	7	9—12	,, 2—5	Monday,	June	6	9—12	,, 2—5

General Examination of Students in Law, and also of other Students in Political Economy, Botany, and Practical Chemistry at the close of the Lectures on these subjects.

Appendix, No. 6.

Lectures delivered by Professors.

APPENDIX, No. 6.

RETURN of the NUMBER of LECTURES delivered by each Professor in the Queen's College, Belfast, in each YEAR.

—	1849, 1850	1850, 1851	1851, 1852	1852, 1853	1853, 1854	1854, 1855	1855, 1856	1856, 1857	1857, 1858	1858, 1859	1859, 1860	1860, 1861	1861, 1862	1862, 1863	1863, 1864	1864, 1865	1865, 1866	1866, 1867	1867, 1868	1868, 1869	1869, 1870	REMARKS.
Professor of— Greek, . . .	135	232	244	246	236	240	234	235	236	350	500*	460*	440*	360*	350	350	350	360	340	340	340	In addition, examining numerous exercises.
Latin, . . .	162	167	216	221	189	196	232	230	230	275	393	234	234	234	230	324	324	324	319	319	316	Do do
History and English Literature, . .	35	55	66	61	104	100	105	105	99	110	123	92	154	146	140	167	167	167	148	148	148	Besides correcting about 650 exercises.
Modern Languages,	208	330	324	307	306	305	319	340	369	307	340	372	372	360	356	356	356	406	406	406	406	
Celtic, . . .	6	6	6	6	6	6	6	6	6	6	6	6	–	–	–	–	–	–	–	–	–	Open to the Public without charge.
Mathematics, . .	135	256	333	248	246	330	346	322	330	400	400	370	370	316	325	330	317	317	296	296	296	Besides three hours each week on which the Senior Scholar meets the Junior Division.
Natural Philosophy	122	257	233	208	256	250	255	307	300	300	242	242	213	182	180	180	190	196	288	266	288	In addition, arranging apparatus, which occupies as much time as the lectures.
Chemistry, . .	134	166	137	129	132	130	138	142	142	140	132	132	132	132	130	130	130	130	130	130	130	In addition, superintending the working pupils, of whom from eight to twelve are admitted each year by examination to the laboratory without charge.
Practical Chemistry	36	36	36	36	36	36	36	36	34	36	36	36	36	36	38	36	55	85	55	55	55	
Natural History, .	120	120	133	137	139	138	142	140	143	140	140	140	140	140	140	140	140	140	140	140	140	Including lectures in Physical Geography, delivered free to all students

Mineralogy and Geology, . .	*Public.*	86	84	59	64	65	49	59	52	52	52	52	52	52	52	58	52	52	52	52	52	In addition, daily attendance as Curator in the Museum
Logic & Metaphysics	–	–	76	142	176	175	164	177	178	167	140	158	194	208	195	193	195	195	198	186	195	In addition, criticising above 600 essays in each session
Civil Engineering, .	184	138	140	139	140	136	147	119	100	194	196	220	198	328	319	236	247	247	247	247	247	Including practical work under the direction of the Professor.
Agriculture, . .	172	206	205	212	209	213	218	186	190	166	166	156	159	80	80	80	41	41	35	35	35	Including lectures on Medical Jurisprudence, for which there is no salary
Anatomy and Physiology, . .	115	116	115	115	114	115	117	119	115	115	115	112	109	108	224	261	260	260	260	260	260	In addition, daily practical teaching in the dissecting-room for three hours by the Professor, and four hours by his assistant.
Practice of Medicine,	93	93	92	92	93	94	94	85	75*	95	95	95	95	95	95	95	95	95	95	95	95	
Practice of Surgery,	93	94	93	91	91	92	94	94	94	94	94	94	94	93	93	93	93	93	93	93	93	Besides about twenty-five lectures each session on Operative Surgery.
Materia Medica, .	92	91	91	93	90	90	92	80	84	84	84	84	84	84	84	84	84	84	80	80	80	
Midwifery, . .	92	92	92	91	90	93	93	93	93	95	80	80	80	76	76	76	76	76	76	76	76	Besides practical instruction to students which may be required at any hour throughout the year.
English Law, .	24	48	72	96	96	98	96	6	96	96	72	72	96	96	96	99	96	96	96	96	96	No third year Class in 1859-60, or fourth year Class in 1860-61.
Jurisprudence & Political Economy, .	24	48	96	120	120	120	120	120	120	96	120	120	120	120	120	120	120	120	120	120	120	-

The above Return gives the number of Meetings of one hour each, in each Class. The system of instruction includes, not merely *formal* Lectures, but also examination in the business of the course; in some classes these examinations are held daily; in others on fixed days of the week, according to the nature of the subject.

The Professors also conduct the General Scholarship Examinations, and some of them, in addition the Matriculation and Supplemental Examinations.

* Including about 110 on Sanskrit and Hindustani.

OCTOBER EXAMINATIONS of Queen's College, Belfast, 1870.

Days.	Hours.	First Year Students.	Second Year Students.	Third Year Students.	Fourth Year Students
Tuesday, Oct. 18	9—12		Suppl. Ex. English. Mod Lang. Math.	Suppl. Ex.—Mod. Lang., Math., Nat. Phil., Chem.	Senior Schol.—Latin.
	2—5		Suppl. Ex.—Greek, Latin.	Suppl. Ex.—Greek, Latin, Logic.	Senior Schol.—Latin.
Wednesday, Oct. 19	9—12		Liter. Schol.—Greek.		Senior Schol.—Greek.
	2—5		Liter. Schol.—Greek.		Senior Schol.—Greek.
Thursday, Oct. 20	9—12		Med. Engin. Schol.—Chem.	Previous Examination, in Arts and Engineering, of Queen's University	Senior Schol.—Chem.
	2—5	Matric.—Math.	Med. Engin. Schol.—Chem.		Senior Schol.—Chem.
Friday, Oct. 21.	9—12	Matric.—Greek, Latin			
	2—5				
Saturday, Oct. 22	9—12	Matric.—English, *in Arts only*			Senior Schol.—Mod. Hist.
	2—5	Matric.—English, *in Medicine, &c.*			Senior Schol.—Mod. Hist.

Monday, Oct. 24.	9—12		Med. Schol.—Botany.	Engin. Schol. { Geol. and Phys. Geog.	Senior Schol.—Nat. Hist.
	2—5	Lists of Matriculated Students to be made out.	Med. Schol.—Zoology. Liter. Schol.—English.		Senior Schol.—Nat. Hist.
Tuesday, Oct. 25.	9—12	Science Med. Engin. } Schol.—Math.	Science Engin. } Schol.—Math.	Engin. Schol.—Math.	Senior Schol.—Math.
	2—5	Science Med. Engin. } Schol.—Math.	Science Engin. } Schol.—Math. Med. Schol.—Anat. and Phys.	Engin. Schol.—Math. Med. Schol.—Anat. and Phys.	Senior Schol.—Math. Med. Schol.—Prac. of Midw
Wednesday, Oct. 26.	9—12			Med. Schol.—Prac. Chem.	Senior Schol.—Nat. Phil. Med. Schol.—Prac. of Med.
	2—5	Liter. Med. } Schol.—English.	Engin. Schol.—Exp. Phys.	Engin. Schol.—Nat. Phil.	Senior Schol.—Nat. Phil.
Thursday, Oct. 27.	9—12	Liter. Med. } Schol.—Latin.	Liter. Schol.—Latin. Engin. Schol.—Geo. Draw.	Engin. Schol.—C. Engin. Med. Schol.—Mat. Med.	Med. Schol.—Med. Jur Senior Schol.—Pol. Econ.
	2—5	Liter. Med. } Schol.—Latin.	Liter. Schol.—Latin. Engin. Schol.—Geo. Draw.	Engin. Schol.—C. Engin.	Senior Schol.—Pol. Econ Med. Schol.—Surg. Anat.
Friday, Oct. 28.	9—12	Liter. Med. } Schol.—Greek.	Liter. Schol.—Mod. Lang		Senior Schol.—Mod. Lang Senior Schol.—Metaph. Med. Schol.—Anatomy.
	2—5	Liter. Med. } Schol.—Greek.	Liter. Schol.—Mod. Lang.		Senior Schol.—Mod. Lang. Senior Schol.—Metaph. Med. Schol.—Physiology.

Students passing the Supplementary Examinations complete the previous year, and take rank accordingly.

Hours of Lectures,—Session 1869-70.

Hours.	Arts.			Civil Engineering.			Medicine.
	1st Year	2nd Year	3rd Year	1st Year	2nd Year.	3rd Year	
9 till 10	*French.* Monday Wednesday Thursday *German.* Tuesday Friday	*Mathematics* Monday Tuesday Wednesday Thursday Friday		*French* Monday Wednesday Thursday *German* Tuesday Friday	*Mathematics.* Monday Tuesday Wednesday Thursday Friday		
10 till 11	*Mathematics.* Monday Tuesday Wednesday Thursday Friday	*French.* Monday Wednesday Thursday *German* Tuesday Friday	*Honor Classes.*	*Mathematics.* Monday Tuesday Wednesday Thursday Friday			
11 till 12	*Latin* Monday Wednesday Friday	*Nat Philos Exp. Phys.* Monday Wednesday Friday *Mat Phys.* Tuesday Thursday	*Eng Lit.* Monday Wednesday Friday *History* Tuesday Thursday	*Exp Phys* Monday Wednesday Friday *Geom Drawing* Tuesday Thursday	*Mineralogy and Geology* Monday Wednesday Friday *Mat Phys.* Tuesday Thursday	*Office and Field Work* Tuesday Thursday	*Exp. Phys.* *3 months* Monday Wednesday Friday *Prac Chem.* [*see below* Summer Medical Classes]
12 till 1	*Greek.* Monday Thursday Friday	*Latin.* Monday Wednesday Friday	*Metaphysics.* Tuesday Wednesday Thursday Friday *History.* Monday	*Geom. Drawing, and Office Work.* Tuesday Thursday	*Office and Field Work.* Tuesday Thursday	*Office and Field Work* Tuesday Thursday	*Anatomical Demonstrations.* Monday Tuesday Wednesday Thursday Friday

1 till 2		*Greek.* Monday Thursday Friday	*Zool. to Mar 1.* Monday Tuesday Wednesday Friday *Bot from May 1.* Monday Tuesday Wednesday Thursday Friday		*Civil Eng.* Monday Wednesday	*Nat. Philos. applied.* Tuesday Thursday	*Zool. to Mar 1.* Monday Tuesday Wednesday Friday	*Bot. from May 1* Monday Tuesday Wednesday Thursday Friday	*Surgery.* Monday Tuesday Wednesday Thursday	*Med. Juris.* Friday
2 till 3	*English.* Monday Tuesday Wednesday Friday	*Logic.* Tuesday Wednesday Thursday Friday	*Pol. Economy* Tuesday Thursday Friday			*Civil and Mech. Eng.* Monday Wednesday			*Anatomy.* Monday Tuesday Wednesday Thursday Friday	Examination on Fridays at 4 o'clock.
3 till 4			*Chemistry.* Monday Tuesday Wednesday Thursday Friday	*Chemistry.* Monday Tuesday Wednesday Thursday Friday	Field Work and Engineering Excursions and additional Lectures for 2nd and 3rd Year Students occasionally on Fridays and Saturdays for some hours			*Chemistry.* Mon. Tues Wed Thur. Fri after May 1 from 2 till 3	*Midwifery* Monday Tuesday Thursday	*Medical Jursprud* Wednesday
4 till 5			Chemical Laboratory open from 9, A.M., till 3, P.M.					*French.* Monday Thursday or from 9-10, A.M.	*Materia Med.* Monday Tuesday Wednesday Thursday	*Prac. Med.* Monday Tuesday Wednesday Thursday

SUMMER MEDICAL CLASSES, COMMENCING MAY 2, 1878

Practical Chemistry,	Monday, Tuesday, Wednesday, Thursday, Friday, from 11 A.M.
Botany,	Monday, Tuesday, Wednesday, Thursday, Friday, 1 P.M.
Experimental Physics,	Monday, Wednesday Friday, 2 o clock; Tuesday, Thursday, 11 A.M.

FACULTY OF LAW—HOURS OF LECTURES.

1st Year.				2nd Year				3rd Year		4th Year					
6 o'clock, P.M.	*Law of Property.* Monday Wednesday Friday	7 o'clock, P.M.	*Jurisprudence.* Monday Wednesday Friday	7 o'clock, P.M.	*Equity and Bankruptcy.* Monday Wednesday Friday	8 o'clock, P.M.	*Civil Law.* Monday Wednesday Friday	11 o'clock, A.M.	*Common and Criminal Law.* Tuesday Thursday Saturday	12 o'clock, A.M.	*Evidence and Pleading* Tuesday Thursday Saturday	6 o'clock, P.M.	*Constitutional & Colonial Law.* Monday Wednesday Friday	12 o'clock, P.M.	*Medical Jurisprudence.* Wednesday, 2 o'clock Friday, 1 o'clock

APPENDIX, No. 7.

Appendix, *No. 7.*

An Enlarged Digest of Subjects and Courses pursued in Queen's College, Belfast.

Digest of Subjects and Courses.

Greek—*Professor, Charles MacDouall,* LL.D., M.R.A.S.

In the Greek Class, as in all those which are attended during more than one session, the business, as well as the hours assigned to the Students of the different years, is necessarily different; but it is always distributed into three simultaneous processes, viz., public examinations, lectures more or less formal, and exercises written at home and commented on in the class.

In the first session, the complex and self-contained structure of the Greek language is subjected to a close analysis; carried out, on the one hand, by tracing words to their crude forms, by classifying terminations, both the primary and the flexional, and by discriminating among analogically correct forms those actually used in different ages and dialects; on the other hand, by exhibiting the methods by which words are combined in simple clauses, clauses are knit into sentences, and sentences compose periods less or more complicated. Some prose-work furnishes the materials for this analysis; while the Students read and translate it, or else re-translate off-hand passages read out in English before them by the Professor. Besides syntactical phænomena, the laws and characteristics of both epic and dramatic versification are expounded and exemplified, while a portion of the *Ilias* and some tragedy are used as text-books.

In the second session, while consecutive passages of Herodotus along with some Attic oration or philosophical treatise, and a portion of the *Odysseia* along with some Attic tragedy or comedy, form the basis of prelections, the previous discipline is continued and extended; the distinctions of dialect and style are more fully elucidated; the origin, growth, and fortunes of the epos, the drama, history, and other departments of literature, are more distinctly unfolded; discussions on points of mythology, geography, chronology, archæology, æsthetics, &c., are more freely introduced and more amply treated. The Students are required to turn Herodotean Greek, at sight, into Attic, altering both the forms of words and the structure of sentences; to re-translate passages into Greek prose and verse; and also to give in original essays in both forms of composition.

In a distinct or higher class, advanced Students, generally in the third or fourth year of their Course, are exercised in the study of more difficult works than those previously read, in the higher problems of criticism and philology, and especially in composing both prose and verse.

The following Text-books have been used in the successive Sessions of College from 1849–50 to 1865–66:—*The Ilias*—all the Books except I., II., IV., V., VII.; *the Odysseia*, Books I. to XVI. (inclusive); Hesiodus, *Theogonia;* Pindarus, *Olympia*, *Pythia*, *Nemea;* Aeschylus, all the Tragedies except the *Supplices;* Sophocles, the seven Tragedies; Euripides, *Alcestis*, *Hippolytus*, *Hecabe*, *Phoenissae*, *Orestes*, *Helene*, *Hercules Furens*, *Bacchae*, *Ion*, *Rhesus*, *Troades*, *Andromache*, *Iphigeneia in Aulide*, *Iphigeneia in Tauris*; Aristophanes, *Nubes*, *Aves*, *Ranae;* Herodotus, Books I., II., III., IV., VII., IX.; Thucydides, Books I., II.; Xenophon, Portions of *Anabasis* and *Cyropaedeia;* Platon, *Apologia Socratis*, *Gorgias*, *Phaedon*, *Phaedrus*, *Philebus*, *Protagoras*, *Theaetetus*, *Timaeus*, and Books I., VII., and X. of *Respublica;* Aristoteles, *Poetica* and portions of *Rhetorica;* Demosthenes, *c. Meidiam* and *de Corona;* Aeschines, *in Ctesiphontem.*

The Sanskrit and Hindustani Classes, conducted during six Sessions by the Professor of Greek, have been discontinued.

LATIN—*Professor, William Nesbitt*, M.A.

Appendix, No. 7.

Digest of Subjects and Courses.

The Professor of Latin gives three lectures weekly to Students of the First, and the same number to Students of the Second Year, attendance upon which is compulsory for those who take the Latin Classes. Besides these compulsory lectures, he gives two lectures additional to Students of each of these years, attendance on which is voluntary, in which more difficult authors are read, and special attention is paid to composition. The attendance on these lectures is very good.

An honor Class has been formed of Students of the Third and Fourth Years, chiefly attended by those who are anxious to distinguish themselves in Ancient Classics at the Degree Examination.

The number of hours during which the Professor lectures each week is thirteen.

HISTORY AND ENGLISH LITERATURE—*Professor, Charles Duke Yonge*, A.B. Oxon.

Class of the English Language.

The business of this Class is conducted by—

A Course of Lectures on the Origin, Formation, Inflections, and Grammar of the English Language, for which Dr. Latham's "English Language" forms in some degree the text-book;

With occasional Lectures on the rules and principles of Prose Composition, and Weekly Essays.

Class of English Literature.

The business of this Class is conducted by—

A Course of Lectures on English Literature in general, and particularly on the lives, works, and styles of the best authors in each department;

With Special Lectures also on the works appointed as the subjects for the Dublin Autumnal Examination of the ensuing year, with and without Honors;

And Fortnightly Essays.

Class of History.

The business of this class is conducted by—

Lectures on History in general;

Lectures on English History, embracing rather the larger half of the entire course;

A subsequent course on the History or that portion of the History of any other country which is selected as a subject for the Dublin Autumnal Examination of the ensuing year.

MODERN LANGUAGES—*Professor, Albert Ludwig Meissner*, PH.D.

The instruction in Modern Continental Languages embraces three courses each for French and German, extending over three terms, and a course of Italian during the first two terms, attendance on which is voluntary.

No entrance examination is as yet held in Modern Languages, in consequence of which the insufficiency of intermediate teaching is more apparent in this department than perhaps in any other. The consequence of this is, that the Professor is over-burdened with a great amount of elementary teaching, without which his classes cannot be kept in good working order. The number of lectures delivered during the past session was no less than 406. Something, it is hoped, may be done to relieve the Professor of some part of the elementary teaching, so as to increase his usefulness in the more advanced classes.

Students in Arts and Medicine, and in the department of Engineering, are required to attend lectures on one Modern Language for one session. The majority select for this purpose the French language; several, however, attend both French and German. For Students in Arts of the second and higher years, Modern Languages form one in a group of four subjects, out of which they select two.

Appendix, *No. 7.*

Digest of Subjects and Courses.

The work of the classes, especially during the first two terms, is carried on to a great extent by means of *viva voce* questions and answers. Frequent oral examinations are held, and at each meeting of the classes a passage is translated from English into French or German.

In the First Session the Grammar and the principles of composition are explained, and select passages are translated from French and German Classics.

In the Second Session a systematic course of composition is gone through, and the Students are made acquainted with the principal authors of French and German Literature.

In the Third Session a course on the elements of Comparative Grammar is delivered, which is followed by a course on some period of Continental Literary History. The students write essays in Modern Languages, which are read and discussed in the class.

Medical Students unable to attend the classes in Arts, are instructed in a separate class.

About six per cent. of the Students attending Lectures on Modern Languages are Non-Matriculated.

MATHEMATICS—*Professor, John Purser,* M.A.

Attendance on this Class is prescribed to all Students in the Faculty of Arts during the first year of their Course; during the second year Mathematics forms one of four Courses, out of which the Students select two.

All Students in the Department of Engineering are required to attend the Mathematical Classes during two years.

Before entering, Students are required to pass an examination in the First and Second Books of Euclid, and in a small portion of Algebra. Practically they come fairly prepared in the prescribed portions of Euclid, but a large proportion can hardly be said to possess even an elementary knowledge of Algebra. A considerable number of the Students are Candidates for Mathematical Scholarships at entrance, and these are generally well prepared in the first six Books of Euclid, and a considerable portion of Algebra and Plane Trigonometry.

On this account the instruction of the First Year in Mathematics has been given in two Divisions. The Lower Division is carefully taken through such portions of Euclid I., II., III., IV., VI., as they have not previously prepared, and is instructed in Algebra as far as the progressions, and in Plane Trigonometry as far as the solution of triangles, with the use of logarithms and trigonometrical tables. In the Upper Division a more advanced course of lectures is given in Geometry, Plane Trigonometry, and Algebra, to which is added either the Conic Sections, treated geometrically, or Spherical Trigonometry.

The Council has sanctioned the employment of the Senior Mathematical Scholar in giving a portion of the instruction of the Lower Division. This arrangement, while it affords a greater number of hours to the Lower Division, enables the Professor of Mathematics to give more attention to the Upper Division, and has been found to work very satisfactorily.

In the Second Year the subjects of Lecture are Analytical Geometry, the Differential and Integral Calculus, and the first three sections of the Principia of Newton.

In the Third Year an Honor Course is given, in which are taught the higher branches of the Calculus, Geometry of Three Dimensions, and Differential Equations.

NATURAL PHILOSOPHY—*Professor, Joseph David Everett,* M.A., D.C.L.

The Classes in this Department are arranged under the three heads of Experimental Physics, Mathematical Physics, and Natural Philosophy Applied.

All Students in the Faculty of Arts in their Second Year attend the Classes of Experimental and Mathematical Physics. Engineering Students attend the Class of Experimental Physics in their First Year, the Class of Mathematical Physics in their Second Year, and the Class of Natural Philosophy Applied in their Third year. Medical Students attend the Class of Experimental Physics only.

In all these Classes the teaching is by prelection interspersed with oral examination.

Digest of Subjects and Courses.

The subjects treated under the head of Experimental Physics include—Properties of Matter, Mechanical Powers, the Elements of Hydrostatics and Hydraulics, Heat, Light, Sound, Electricity, and Magnetism; the leading principles in these several departments being broadly laid down and copiously illustrated by experiments.

The Course of Mathematical Physics includes a rigorous demonstration of the principal theorems in Statics and Kinetics, an explanation of the leading principles of Astronomy, Geometrical Optics, and the Mathematical treatment of numerous questions connected with the subjects of the Experimental course.

In the Class of Natural Philosophy Applied, the subjects include a more advanced course of Statics, Kinetics, and Hydrostatics, involving application of the Differential and Integral Calculus, and illustrated by practical examples, Kinematics, including the principles of Mechanism, the relations of Stresses and Strains, Moduli of Elasticity and Rigidity, Work Done, Kinetic and Potential Energy, Elements of Thermodynamics.

In addition to the above-named Classes, there is an Honor Class, attended by Senior Students, in which the subjects prescribed for University Honors are studied.

CHEMISTRY—*Professor, Thomas Andrews*, M.D., F.R.S., M.R.I.A.

In the Class of Chemistry the greater part of the Course is devoted to pure Chemistry; but the Elements of the Sciences of Heat and Electricity, particularly in their relations with Chemistry Proper, are also taught. The application of these sciences to the arts are particularly referred to; and it has been the constant endeavour of the Professor to communicate to the Students as precise and accurate information as possible on the subjects treated in his Lectures, and to train them to habits of careful observation and accurate thinking. With this view a weekly examination of the whole Class is held, at which the Students are subjected to a searching examination on the business of the preceding week; and further to encourage a taste for scientific inquiry, and also to train a certain number of practical chemists, a limited number of the Students are admitted, by examination, as working pupils into the chemical laboratory, where they have an opportunity of acquiring a knowledge of chemical analysis. This latter arrangement has now been in practice for several years, and has been attended with the best results.

NATURAL HISTORY—*Professor, Wyville Thomson*, LL.D., F.R.S.

The Zoological Department of the Course occupies the First Term and greater part of the Second, and comprehends the Outlines of Anatomy and Physiology of animals, followed by Systematic Zoology, and remarks on the distribution of animals.

The Botanical part comprehends Vegetable Anatomy and Physiology, Systematic Botany, and distribution of vegetable forms. In addition to the Class Lectures, meetings are held in the Botanic Garden, and practical excursions made into the neighbouring country.

This Course comprehends chiefly Lectures on the structure and form of continents and islands; the distribution of mountain systems, rivers, and lakes; the ocean, its currents, temperature, &c.; the atmosphere, its currents, &c.; rain, snow, &c. The preceding subjects are considered in relation to the geographical distribution of animals and plants.

These different branches are illustrated by specimens, or drawings, or both, as the case may be.

GEOLOGY AND MINERALOGY—*Professor, Wyville Thomson*, LL.D., F.R.S.

The Courses consist of lectures, demonstrations, and examinations. The Geological Course embraces the general principles of the science, and a detailed investigation of the palæontological, lithological, and economic characters of all the formations. The Students are exercised in the practical use of the necessary instruments, and in the construction of Geological maps and working sections.

Appendix, No. 7.

Digest of Subjects and Courses.

The characteristic fossils of the different formations are rendered familiar by the exhibition of specimens and models, and an excellent series of drawings. Drawings are also used for the illustration of the underground workings of mines of copper, coal, &c.

In the Mineralogical Course the Students are instructed in the most modern crystallography by models, and exercised with the reflecting goniometer. The electro-chemical classification of minerals is then explained, and an extensive suite of minerals in the Museum is arranged on that system, for the instruction of the Students.

Once a week examinations are held, and additional explanations given of the subjects of the preceding lectures.

Logic and Metaphysics—*Professor, John Park*, M.A.

Logic.

This class meets at 2 P.M., on Tuesdays, Wednesdays, Thursdays, and Fridays, during the First, and part of the Second Term of the Session.

The business of the class is conducted by lectures on—1st. The laws of Pure or Formal Thought. 2nd. The laws of Thought as directed to particular classes of objects, and as dependent to some extent on the special natures of these objects; by examinations on the lectures and on Whately's "Logic," and by the criticism of Essays on Logical subjects.

Students are recommended to read Morell's "Handbook of Logic," and Bacon's "Novum Organum," Book I., before entering the class.

Metaphysics.

This class meets at noon, on Tuesdays, Wednesdays, Thursdays, and Fridays, during the First and Second Terms of the Session.

The business of this class is conducted by lectures on—1st. Psychology, or the science which examines the facts and the conditions of the phenomena of the human mind; and, 2nd, Metaphysics Proper, or the science which investigates the Nature of Truth and of Existence; by examinations on the lectures, on Mansel's "Metaphysics," and on Henry's translation of "An Epitome of the History of Philosophy; and by the criticism of Essays on Metaphysical subjects.

Higher Logic.

This class meets three times a week, and is conducted by lectures, and a course of reading and examinations.

Civil Engineering—*Professor, James Thomson*, M.A., C.E.

The Courses of lectures and practical instruction given by the Professor of Civil Engineering are arranged to accord with the Ordinances of the Queen's University, which prescribe to candidates for the Diploma in Civil Engineering a Curriculum extending over three Sessions usually, but admitting of abbreviation to two Sessions in the case of students whose previous acquaintance with a sufficient group of the subjects prescribed for study in the first and second Sessions of the ordinary Course shall be deemed by the College Council satisfactory.

For the First Year Students the Professor gives a course of instruction, comprising lectures and oral examinations on the Principles of Geometrical Drawing, and the performance by the students of practical work under his direction. The lectures include the principles of descriptive geometry, orthographic and isometric projection, and linear perspective; and the practical work comprises the performance of examples in these subjects, and the execution of drawings in Mechanical Engineering, and occasionally also in Architecture and Civil Engineering. The Class meets for two hours at a time on two days per week during the three Terms of the College Session.

For the Second Year Students two courses are conducted by the Professor of Engineering, of which one is a Lecture Course and the other a Practice Course. The Lecture Course comprises surveying, levelling, and plotting, with the theory

Appendix, No. 7.

Digest of Subjects and Courses.

and use of the instruments required in surveying and levelling operations; mensuration of earthworks for railways; setting out works on the ground, including ranging of railway curves, and setting out breadths of cuttings and embankments, and ranging tunnels, &c. The Course also comprises usually some of the following subjects:—revision and farther prosecution of descriptive geometry, and perspective, and other subjects of geometrical drawing; designing and drawing of oblique bridges; properties and qualities of materials used in construction, and modes of procuring them; and an introduction to architecture as a fine art.

In the Practice Course of the Second Year the Students are engaged in the performance of office and field work, under the instruction and direction of the Professor; and the business includes surveying, levelling, drawing, mapping, and the computation of areas of lands, and other engineering calculations. Excursions are also made occasionally during the Session to visit Engineering works.

For the Third Year Students there are (as for those of the Second Year), two Courses conducted by the Professor, one a Lecture Course, and the other a Practice Course. The Lecture Course comprises the farther treatment of some of the subjects proposed to be entered on in the Second Year, and most of the following subjects:—foundations, cofferdams, bridges, tunnels, roads, and railways; specifications for engineering contracts; water-works for supplying towns; science of the flow of water in orifices, pipes, and canals; drainage of fens by gravitation, and by steam power and other mechanical means; regulation and improvement of rivers; science of the strength of materials and structures; ventilation of dwelling-houses, public buildings, and mines; processes and mechanisms used in foundries and engineering workshops.

The Practice Course includes officework, field work, and engineering excursions.

ANATOMY AND PHYSIOLOGY—*Professor, Peter Redfern,* M.D. Lond., F.R.C.S.

The Department of Anatomy and Physiology comprises two distinct Courses of Lectures—one on Anatomy and Physiology, the other on Descriptive and Surgical Anatomy, and also the teaching of Anatomy by Dissections throughout the day.

The Course of Anatomy and Physiology includes about 144 meetings, each of an hour's duration, held on the first five days of each week from November to April inclusive. These meetings are for lecture and occasional examinations on the subjects previously considered in the lectures. The lectures include a complete course of the Anatomy and Physiology of the general textures of the body, including the blood, chyle, &c., and a systematic account of the whole of the viscera, treated of as they are associated in groups for the several purposes of digestion, circulation, respiration, urination, innervation, and generation; also the organs of sense. In treating of every part or organ its healthy state is shown by recent dissections and by preparations from the Museum illustrating it in man and animals, its diseased states and actions being referred to at the same time and contrasted with the healthy ones. The textures not visible to the naked eye are shown under a series of achromatic microscopes, so that during the Course every student in the class has an opportunity of judging for himself of the true characters of each part, and, by becoming familiarized with these, of recognising each when changed by disease.

The Course of Practical Anatomy and Anatomical Demonstrations includes:—

1st. Dissections carried on throughout the day under the immediate superintendence of the Professor of Anatomy and Physiology, and the Demonstrator. Each Student is required to be steadily engaged in dissections during the whole Session. For this purpose the supply of subjects is regular and abundant, and thus affords the surest foundation for efficient medical teaching.

2nd. This Course includes the Anatomical Demonstrations, which consist of a complete Course of Descriptive and Surgical Anatomy, commencing with the anatomy of the skeleton and bones, and including the anatomy of the limbs and other parts, excluding that of the viscera and the physiology treated of in the Course of Anatomy and Physiology. The demonstrations are given on each of the first five days of the week, and are about 117 in number in each Session.

Appendix,
No. 7.

Digest
of Subjects
and
Courses.

Practice of Medicine—*Professor, James Cuming,* M.D.

The class meets four times each week, from the first week of November to the last of the following April.

An examination is held usually once a fortnight. The Course embraces the principles of Inflammation, Fevers, the diseases, organic and functional, of the viscera of the three great cavities of the human body. In treating of individual diseases, their pathology, semeiology, ætiology, and treatment, are the subjects chiefly dwelt on. Wherever it is possible, pathology is illustrated by the preparations afforded by our Museum, by drawings and plates, or by recent specimens. It may be added that the Professor's present connexion with the Belfast General Hospital adds greatly to the means of making his Course more useful and interesting to students.

Theory and Practice of Surgery—*Professor, Alexander Gordon,* M.D.

Four Lectures are delivered weekly during the Medical Session. An examination is held each day on the subject of the preceding day's Lecture. Each Course comprises the following subjects:—

- Inflammation,
- Suppuration,
- Mortification,
- Erysipelas,
- Burns,
- Ulcers,
- Wounds,
- Hæmorrhage,
- Diseases of the Arteries,
- ,, Veins,
- Fractures of Trunk and Extremities,
- ,, Cranium, Injuries of the Brain and Scalp,
- Dislocations,
- Diseases of the Joints,
- Diseases of the Bursæ,
  - ,, Bone, benign and malignant,
  - ,, the Jaws and Mouth,
  - ,, the Fingers and Toes,
  - ,, Female Breast,
  - ,, Anus and Rectum,
  - ,, Testis,
  - ,, Hernia,
  - ,, Prostate,
  - ,, Bladder,
  - ,, Eyes,
  - ,, Larynx,
- Syphilis,
- Gonorrhœa,
- Stricture.

All the capital and minor operations are performed on the dead subject. The Professor delivers a separate Course of twenty-five Lectures on Operative Surgery.

Materia Medica—*Professor, James Seaton Reid,* M.D.

This Course includes—

1st. General Pharmacology, or the modes in which medicines act upon the living organism in a state of health.

2nd. Therapeutics, or the modes in which medicines act as curative agents.

3rd. Pharmacy.

4th. Dietetics, a review of the different kinds of food used in health and in disease.

5th. Special Pharmacology, or the history, composition, uses, and modes of administering medicinal agents for the cure of disease.

The Class meets four times each week. An examination is held once every week.

MIDWIFERY—*Professor, Robert F. Dill*, M.D.

Lectures four times a week during the six winter months consist of following subjects:—

Anatomy of the pelvis, so much as is required for midwifery. Its measurement and pelvimeters.

Contents of the pelvis. The functions of the uterus in its virgin state.

Conception—length of gestation—changes of the uterus and its appendages during gestation.

Growth of child from its earliest seen form until its full parasitic size.

Graafian vesicle and corpus luteum. Fœtus, its circulation, signs of maturity, weight, and length.

Plural births.

Proportion of births and deaths of males to females.

Superfœtation.

Signs of pregnancy.

Signs of approaching labour.

Natural labour, its progress; also the positions and progress of child till its separation from its mother.

Management of natural labour, including the arrangement of the bed and bed-room, and the proper dress and posture of the patient.

Tedious labour, its causes and treatment.

Labour requiring the use of instruments; their application taught on models in the class.

Cæsarean section and Sigaultean operation—how to prevent the fœtus from getting large in uterus.

Premature labour—how to bring it on, and when it is necessary to do so.

Cross-births and their treatment.

Abortion—how to prevent it.

Extra uterine fœtations—how they occur, and their treatment.

Management of women after delivery, and treatment of such accidents and diseases as occur at this period.

Management of children after birth, washing, dressing, food, &c., and the choice of a wet-nurse, and treatment of such accidents as take place at this period, or soon after.

Practical midwifery taught by pupils attending patients in their own houses and in the Lying-in hospital, where Clinical Lectures are given.

MEDICAL JURISPRUDENCE—*Professor, Dr. Hodges.*

The Lectures in this Course are delivered twice weekly during six months. They include an account of the history and chemical investigation of poisons, and of the various subjects respecting which the evidence and assistance of Medical Practitioners may be required in Courts of Law. Experimental illustrations of the methods to be pursued in medico-legal inquiries are given, and frequent examinations held to test the progress of Students. No salary has been allocated to the Teacher of this department, and the duties, at the request of the Council, have, since the opening of the College, been performed by Dr. Hodges.

ENGLISH LAW—*Professor, Echlin Molyneux*, Q.C.

The Professor of English Law, in conducting his department, has constantly kept in view the object of the Select Committee of the House of Commons in recommending the foundation of Chairs in Law in connexion with the Queen's Colleges, which, as they stated in their Report on Legal Education, was not merely to prepare Candidates for the Bar, and for the profession of Attorney and Solicitor, but to raise the standard of legal attainments amongst local practitioners, and especially to provide opportunities of legal education to qualify persons intended to fill administrative situations not strictly legal—a policy which has

Appendix, No. 7.

been since followed up by the Legislature conferring privileges, by way of inducement, on Candidates for the profession of Attorney and Solicitor, who shall avail themselves of these Schools of Law.

Digest of Subjects and Courses.

The Course of the *First* year in this department comprehends the elements of real and personal property, with the principles of conveyancing; that of the *Second* consists of an introduction to the principles and practice of Courts of Equity and the law of Bankruptcy; the *Third* Course includes the common law as incident to contracts, the nature and form of remedies by civil action, and an outline of criminal law, theoretical and administrative, which last completes the Curriculum of instruction required for the attainment of the Diploma of Elementary Law in the Queen's University. The subjects prescribed for Students of the *Fourth* year to qualify them for the Degree of LL.B. embrace a more extended and detailed course of the subjects already enumerated, including the law of wills, powers, evidence, and procedure.

The Lectures are made auxiliary to the cotemporaneous studies directed, and are accompanied by interrogation, independent of the General Examination and that for Honors. Such books, cases, and decisions, and portions of treatises are pointed out for reading as are considered by the Professor most useful in elucidating a branch of learning which is scarcely furnished with books exclusively intended for instruction; and no efforts have been spared to point out the peculiarities of the law in Ireland, whether proceeding from statutes or inherent diversity of practice, or to direct attention to the recent changes which have been introduced into the course of procedure.

From the first opening of the College to the present time the successive classes have spontaneously applied themselves with assiduity and perseverance to the various subjects of legal instruction, and several Non-Matriculated Students have from time to time availed themselves of the privilege afforded by the College Ordinances of attending detached Courses of the Lectures on selected subjects.

Under these circumstances, the Professor is gratified at being able to give the assurance that the Faculty of Law has fully realized the objects of its founders, and that a further extension of its public benefits would ensue upon the adoption by Government of the suggestion made by the same Committee of the House of Commons that a preference should be given to candidates for situations in the Civil Service, not of a purely legal nature, who could produce testimonials of legal attainments from those institutions—a rule which would fully accord with the principle laid down in a recent report of another Committee in relation to the Civil Service.

JURISPRUDENCE AND POLITICAL ECONOMY—*Professor, T. E. Cliffe Leslie,* LL.B.

The subjects embraced in the Course of Lectures on *Jurisprudence* are according to the regulations of this College, (1) the Elements of Jurisprudence, (2) Civil Law, (3) Constitutional Law, (4) Colonial and International Law.

In the treatment of these subjects both the *Historical* and *Philosophical* Methods are followed in the Lectures of the Professor. The Historical Method, for example, is applied in tracing the principal changes through which the laws of England have passed, the assignable causes of such changes, and the degree and manner in which, in comparison with the laws of Continental Europe, the laws of this kingdom have been affected by contact with the principles of Roman legislation. The method of Philosophical Analysis, on the other hand, is applied in investigating the doctrines of the foundation and classification of rights, the several parts and legitimate form of a complete code, the relation of Scientific Jurisprudence to other departments of Social Philosophy, and the means of improving the state of Positive Law as deducible from such considerations.

The subjects which a Course of Lectures on *Political Economy* must embrace are fewer and more definite than those classed under the less advanced and more complicated Science of Jurisprudence. It is the Professor's endeavour to illustrate the principles of Economic Science by the help of those practical applications which will be most interesting and useful in a large commercial town.

APPENDIX No. 8.

Appendix, No. 8.

General Class Examination.

GENERAL CLASS EXAMINATION at the end of the SESSION 1869-70.

FIRST YEAR STUDENTS.

THE ENGLISH LANGUAGE.—*Examiner, Professor Yonge.*

SUBJECT FOR ESSAY.

THE ADVANTAGES OF GENERAL EDUCATION.

1. "The English Language came from Germany" (Latham's Handbook, p. 9). From what part or parts of Germany? at what time or times? and to what extent can we rely on the common accounts of the events which introduced the change in the former language of Britain, which this statement implies?

2. From what other language or languages, besides Saxon, does the present English Language derive its different elements? Explain to what extent it is possible to trace those other languages by words or terminations derived from each.

3. What does Dr. Latham understand by the term "Composition?" What rules does he lay down with respect to it? And, according to him, what "different parts of speech are capable of being put together by composition?"

4. Examine Dr. Latham's arguments on the question, how far the English Language can be said to have cases, numbers, genders, tenses, moods, &c.

5. Recapitulate Dr. Latham's principal statements about "certain forms in *er*."

6. What is the rule relating to "absolute constructions?"

7. How many classes of pronouns are there? Give a list of them; and point out any resemblances which occur to you between the pronouns in English and in other languages.

8. Explain the different uses of *shall* and *will* in the different persons. Give Sir Edmund Head's rules concerning these forms.

9. Examine the grammatical correctness of the following sentences:—

> The right to recall the Governor-General, and to declare war, are vested in the Court of Directors.
>
> As when the excellence of the Church, of the House of Lords and Commons, of the procedure of the Law Courts, &c., are inferred from the mere fact that the country has prospered under them.
>
> There are, indeed, but very few who know how to be idle and innocent, or have a relish of any pleasures that are not criminal. Every diversion they take is at the expense of some one virtue or other; and their very first step out of business is into vice and folly.

Appendix, No. 8.

General Class Examination.

SECOND YEAR STUDENTS.

LOGIC.—*Examiner, Professor Park*, M.A.

1. Define Formal Logic. State the leading questions of Material Logic. Contrast Sir W. Hamilton's conception of Logic with that of Mr. J. S. Mill.

2. Define *concept*, *common term*, *contradictory term*, *term distributed*.

3. What are Logical Division and Logical Definition? State the conditions of a correct definition.

4. What are the heads of predicables? Explain the symbols, U, I, E. What propositions distribute the predicate, and why?

5. What is an opposition? A contradictory opposition? A subcontrary opposition? How may we convert E, A, and I? Is O convertible?

6. State which of the following modes are inadmissible, (and why), IAI, IIA, IEO, OIO.

7. State the general rules of the syllogism, and prove the special rules of the second figure.

8. Prove that EIO is the only mode valid in every figure; that both premisses are universal, if the minor term be distributed in the premisses; and that the fourth figure rejects an O premiss and an A conclusion.

9. (*a*) What is the unfigured syllogism? (*b*) Should the fourth figure be retained? Give reasons for your answer.

10. Reduce to the appropriate modes in the first figure, Cesare, Baroko, Datisi, Fesapo.

11. Construct a sorites, and a destructive conjunctive syllogism. Examine these arguments,—"If what A. B. told me be true, my friends have much deceived me; but A. B. is a notorious liar, and, therefore, I trust them." "If this calculation be correct, corn should be dear, as it certainly is, and cloth comparatively cheap, as is the case, and, therefore, I accept the calculation."

12. Estimate the probabilities of the conclusions based on the following *data* :—

> (1) "Of these men two-thirds will die within ten years, and of those dying within ten years one-half will die unmarried, ∴ this man will die unmarried."
>
> (2) "Of these men two-thirds will be fined, two-thirds imprisoned, one-third transported, and one-sixth die in exile, ∴ this man will be fined, imprisoned, or transported, and will die in exile." State the principles by which you compute the probabilities.

13. What fallacies are incident to observation? Point out the errors which underlie the following reasoning :—

> "Tis'n them as 'as munny as breäks into 'ouses' an steäls,
> Them as 'as coats to their backs an taäkes their regular meäls,
> Noä, but it's them as niver knaws wheer a meäl's to be 'ad.
> Taäke my word for it, Sammy, the poor in a loomp is bad."

14. Define *cause*, "*kind*," *empiric law*, *induction*.

15. Enunciate the canon of the Method of Residues. "A bullet is fired from a gun, and an animal falls down dead. There is no hesitation in ascribing the death to the gunshot;"—of what method is this inference an instance?

16. Explain why it is that (1) "in the attempt to ascertain the effect

Appendix, No. 8. General Class Examination.

of a given cause, there can be no question of the general superiority of Experiment over Observation." And (2) "whenever we have our choice between the Method of Agreement and the Method of Difference, we should invariably select the latter."

17. What is meant by "*explanation*," "*consilience of inductions*," *the deductive method*, *perfect induction*?

18. Distinguish a Natural from an Artificial Classification. What are the facts of co-existence which we seek to ascertain inductively? Indicate the nature of the proof appropriate in each case.

19. Define and illustrate "*Petitio principii, Ignoratio Elenchi, Illicit process*, and *Fallacia accidentis*."

20. Examine the following arguments:—

(1) No persons destitute of imagination are true poets. Some persons destitute of imagination are good logicians. ∴ Some true poets are not good logicians.

(2) Cogito, ∴ Sum.

(3) Most men have coats,
Most men have waistcoats,
∴ Some men have both.

GEOLOGY AND PHYSICAL GEOGRAPHY.—*Examiner, Professor Wyville Thomson.*

1. Explain what is generally understood by a "formation."

2. Give an outline of the principal phenomena of denudation.

3. Describe the usual mode of occurrence of trap, and explain so far as you can the various kinds of structure which frequently occur in trap rocks.

4. What is the origin of amygdaloidal cavities in trap? With what minerals are such cavities usually filled?

5. What is the succession of the permian beds in Britain? Name some fossils characteristic of each member of the series.

6. Under what circumstances and in what-localities are tertiary formations principally met with in Europe? Give the succession of beds in the London basin, with characteristic fossils.

7. Name, and give the general characters of the extinct orders of vertebrates.

8. Describe the lias; give its subdivisions and its distribution in Britain, and give a general account of the fauna of the period.

9. Name, and give the chemical composition of some of the minerals which enter most largely into the composition of crystalline rocks.

ZOOLOGY.—*Examiner, Professor Wyville Thomson.*

1. Describe the nature, the functions, and the distribution of the ambulacral vascular system in the echinodermata. What is the minute structure of the hard parts in the same sub-kingdom?

2. Describe the mode of articulation or suspension of the lower jaw to the skull in the boa constrictor, the crocodile, the frog, the cod, the eagle, and the deer.

3. Give the characters of the ruminants, describing the dentition, the structure of the stomach, the general and special peculiarities of the bones of the head and face, and the structure of the extremities.

Appendix, *No. 8.*

General Class Examination.

4. Give an outline of a generally-received classification of the amphibia, stating the characters of orders.

5. By what characters would you at once distinguish the most rudimentary vertebrate from a worm?

6. What mammals and reptiles, recent and fossil, have organs of flight, or parachutes? Describe the various plans of structure of such organs.

7. Distinguish the pelvis of a bird from that of a saurian reptile, and describe the structure of each.

8. What is the difference in mode of development between a placental and an a-placental mammal?

9. Trace the modifications in development and in distribution of the principal blood-vessels concerned in respiration, during the passage of a tadpole into a frog.

[Students in the senior division will be expected to answer the last two questions in detail.]

English Law.—*Examiner, Professor Molyneux.*

LAW OF PROPERTY AND CONVEYANCING.

1. Describe the several classes of estates tail.

2. What are the conditions which give rise to an estate by the curtesy?

3. What form constitutes a deed, and what ceremony is necessary to give it final effect?

4. What forms are prescribed by the Wills Act, 1 Vict., to give a will validity?

5. What is the ultimate limitation of time to save the operation of the Statute of Limitations in case of successive disabilities?

6. Why, in making out title to lands in Ireland, is it necessary to give evidence of the original grant from the Crown, although a title otherwise perfect is shown from a period long subsequent to such grant?

7. In what respect does a mortgage differ from a conditional sale, as to the reconveyance of the lands to the grantor?

8. What is a base fee, and how is such created?

9. How does the Statute of Limitations, 3 & 4 Will. 4, affect tenancies at will?

10. How does an estate in *quasi* tail arise, and how is it barred?

11. As to what class of estate of married women is an acknowledgment of the deed apart from her husband necessary to give validity to the alienation of such property by such deed?

12. In what instances does the Statute of Uses fail to operate in passing legal estates through the medium of trustees to uses?

13. What are the special provisions in the Act for converting leases for lives renewable for ever into grants in fee, which obviate the difficulty experienced in ascertaining the persons legally competent to grant and accept renewals of such leases?

14. State the several classes of chattel property.

15. A man, being possessed of personal property, dies intestate and unmarried. In what cases do his kindred take per stirpes, and in what per capita, as provided by the Statute of Distributions?

16. In whom does the personal property of a deceased person primarily vest?

17. Conveyance of lands to A for life, and after his decease to his heirs; how does such assurance operate with respect to A and to his heirs?

18. Under what circumstances is the heir to be sought among the

Appendix, No. 8.

General Class Examination.

collateral relations of the deceased mother of the person last entitled, before the father or his kindred can succeed to the inheritance?

19. Lands conveyed to A B for life, and after his decease to trustees for the use of C D until the first son of E F (who was then unmarried) should attain the age of 22 years, and then said trustees to convey said lands to such son—what estates and interests are created by those limitations?

20. *Blackacre* conveyed to trustees to the use of A B and the heirs of his body, but if he shall die under the age of 21 without such issue, remainder to C D and his heirs.

Whiteacre conveyed to trustees to the use of A B and his heirs, but if he shall die under the age of 21 years, remainder to C D and his heirs.

Yellowacre conveyed directly to A B and his heirs, but if he die unmarried, remainder to C D and his heirs.

What are the several estates created as to Blackacre, Whiteacre, and Yellowacre, respectively.

21. State what class of real property lay in livery, and what class in grant, respectively, at common law, and how and when was the law altered in that respect?

EQUITY AND BANKRUPTCY.

1. *Blackacre* conveyed to trustees to the use of A B and the heirs of his body, but if he shall die under the age of 21 years without such issue, remainder to C D and his heirs.

Whiteacre conveyed to trustees to the use of A B and his heirs, but if he shall die under the age of 21 years, remainder to C D and his heirs.

Yellowacre conveyed directly to A B and his heirs, but if he die unmarried, remainder to C D and his heirs.

What are the several estates created as to Blackacre, Whiteacre, and Yellowacre severally and respectively?

2. State what different classes of real property lay in *livery* or in *grant* respectively at common law; and how and when was this altered in that particular?

3. Where a person dies intestate and unmarried, state in what cases do collateral kindred take per capita, and in what per stirpes?

4. In what instances does the Statute of Uses still leave real property exclusively within the sole cognizance of a court of equity?

5. In what case do the rules of construction of instruments in courts of equity differ in regard of executory agreements to be carried out by future settlements, and such executed settlements?

6. A bond debt due to a feme sole who marries, the husband dies and afterwards the wife, the debt being still due; who is the party competent to give a legal discharge?

7. Under what circumstances does the equity of a wife to a settlement arise?

8. By marriage settlement the husband's property is settled to the use of himself for life or until he shall become bankrupt or insolvent, and upon his death or bankruptcy or insolvency to his wife for life, remainder to his children in equal shares, the settlement also providing that the wife hands over to her husband her personal fortune, which is accordingly done. The husband becomes bankrupt. The bankrupt assignee proceeds in equity to set aside the settlement. What decree will be made?

9. Deeds procured by personal intimidation; the grantee proceeds at

law upon it; which is it more advantageous for the defendant at law to plead non est factum, or himself to bring a suit in equity?

10. Lands conveyed to A for 21 years, renewable to the eldest son who shall be born to B, for life, B being then unmarried, remainder to C in fee. B marries afterwards and has a son. What is the devolution of title as to these persons in succession?

11. On marriage, settlement of real estate to the use of the husband for life, remainder to the wife for life, remainder to the children of the marriage share and share alike, in tail, and in default of such issue, remainder to C, the husband's cousin, in fee simple. The husband at the time of the marriage was largely indebted. Husband and wife die without issue. A creditor files a bill for the sale of the estate; C sets up her claim under the marriage settlement. What are the rights of the parties?

12. A person being a trader and indebted, vests all his property in trustees to sell for the benefit of his creditors; before any creditor assents the trader revokes the trust; a creditor afterwards files a bill against the trustees for a sale for the benefit of creditors and payment to them out of the proceeds. A fiat of bankruptcy is declared against the trader, founded on a sufficient petitioner's debt and deed of trust as an act of bankruptcy. What are the relative rights and obligations of the plaintiff in equity, the assignee of the bankrupt, and the bankrupt himself?

13. What renders the title in equity to a debt assigned by the creditor without the consent of the debtor insecure?

14. What was the position of specialty debts in the administration of legal and equitable assets respectively, before the 32 & 33 Vict. ch. 46, abolishing the distinction as to priority of payment between specialty and simple contract debts; and what were the grounds of such distinction?

15. What circumstances are held by courts of equity to rebut the presumption of advancement of a child being intended by the testator as a satisfaction of a legacy.

16. What general principle recognised by courts of equity formed the foundation of the right of redemption on the part of the tenant as provided by the Acts regulating ejectment for non-payment of rent?

17. Parol evidence that a term in a contract for the sale of lands was omitted by fraud: is such evidence admissible for the plaintiff or defendant in a suit for specific performance; and if but one, is it the person, seeking to enforce the contract or the person resisting the performance?

18. Where a guardian deals with his ward or a parent with a child when arrived at age, is the transaction absolutely void, or only conditionally void? and if the latter, state the condition?

19. Mortgage of a furnished house, the residence of a trader who continues to occupy it. In what respect is such a security hazardous?

20. Lease for lives with covenant for perpetual renewal, the tenant paying £20 on each renewal. The lives have been all suffered to fall without any renewal taken; the tenant continuing in possession and paying rent under the lease; the tenant seeks to obtain a grant in fee under the Leasehold Conversion Act. What facilities does the statute provide as to the assignation of the proper parties to the deed? How is the new rent to be ascertained? and what other pecuniary terms must the tenant comply with?

COMMON AND CRIMINAL LAW.

1. How does the Statute of Limitations operate with respect to express trusts? and how as to fraud?

2. Where there has been breach of a condition against alienation con-

Appendix, No. 8.

General Class Examination.

tained in a lease, what is the law as to waiver *at present* in such a case, and how does it differ from that which prevailed at *common law?*

3. What are the only two methods by which breach of a simple contract can be discharged at law?

4. Give some instances of implied warranty.

5. A bill of exchange drawn in England upon a French merchant; the drawer indorses the bill in England; the French merchant accepts the bill; action against the acceptor and also action by indorsee against the drawer, on the dishonour of the bill. How is the *lex loci* applicable in those actions respectively?

6. What leading fact is essential to maintain an action of *trespass de bonis aspartatis* which is unnecessary to make a case for an action of trover?

7. What is the implied warranty on the part of the insurer in every case of marine insurance?

8. What circumstances will discharge a surety?

9. In what cases can an action be maintained against an infant?

10. What criminal prosecutions can alone be originated in the Court of Queen's Bench?

11. What are the nature and effect of contributory negligence?

12. What is the nature of the writ of mandamus which issues from the Court of Queen's Bench?

13. How far have the penal consequences of conviction for treason and felony been mitigated by statute?

14. What is the difference between larceny and embezzlement?

15. What was the ground upon which the House of Lords held the indictment bad in the O'Connell case; and what had been the general practice and opinion of the Bar on the point before that occasion?

16. Under what circumstances does the writer of an official communication, complained of as libellous, lose the benefit of privilege?

17. In what respect does the action for compensation for death from negligence differ from the ordinary course of actions brought by executors for injury to the prospects of the deceased?

18. What facts will furnish defences to an action by indorsee against indorser of a bill of exchange, although the drawer's acceptance and indorsement are proved?

19. What qualification introduced into a bill of exchange will deprive it of its negotiable character, although as a contract it is valid as between the original parties?

20. How is the validity of a guarantee affected by its relation to an *executory* or an *executed* contract?

21. *Parol* evidence that a term in a contract for the sale of lands has been omitted by fraud; is such evidence admissible for plaintiff or defendant in a suit for specific performance; and if only admissible for one of them, whether is that one the person who seeks to enforce the contract or the person contesting the performance? And state the reason of such a distinction?

22. Lands, on marriage, conveyed to trustees to the use of A B for life with remainder to the first son who should be born to him, for life, remainder to O P in fee simple, with power to such son to revoke those uses and declare new uses, to himself for life, remainder to his first and other sons in tail; the son of A B did accordingly revoke and appoint to the new uses. How will such limitations operate?

23. In what case will a misrepresentation on sale of goods render the contract void although no warranty?

24. In what cases is symbolical delivery of goods held sufficient delivery?

Appendix, No. 8.
General Class Examination.

25. In case of intestate dying without issue, but leaving personal property, how are the degrees of kindred reckoned in ascertaining collateral next of kin, where there are no individuals answering the description of those provided for by the Statute of Distributions?

JURISPRUDENCE AND POLITICAL ECONOMY.—*Examiner, Professor Leslie.*

JURISPRUDENCE.

1. Show how the necessity for changes in the law arises in the progress of society, and give examples.

2. How are such changes usually effected in the earlier stages of legal progress? Give examples.

3. Explain the connexion between feudalism, the invention of uses and trusts, and the division between law and equity.

4. Compare the English and French systems of criminal procedure, and point out the defects of each.

5. What effects would the complete fusion of law and equity, and the extension of the jurisdiction of local courts, produce upon the legal profession, and why?

6. Why ought every court to have complete jurisdiction over all classes of cases, according to Bentham's principles?

7. What is meant by "unwritten law?" Is the English Common Law "unwritten" in any, and if any, in what sense? Was it ever unwritten in another sense?

8. Explain the meanings of *agnatic* and *cognatic* relationship.

9. Explain the connexion between the *jus gentium*, the *jus naturæ*, and the *æquitas* of the Roman jurists.

10. What are the three postulates which form the foundation of International Law?

11. What was the connexion between feudalism and International Law?

12. Explain Mr. Maine's proposition that the movement of the progressive societies has been a movement from status to contract.

JURISPRUDENCE AND CIVIL LAW.

1. Give some account, with dates, of the contents of Justinian's Corpus Juris.

2. Give some account of the relations between English and Roman Law at successive periods.

3. Explain the difference between the Roman *haeres* and the English *heir*.

4. How do you account for the early appearance of a law of *obligations* at Rome?

5. How do you account for the superiority of the Greeks over the Romans in Jurisprudence?

6. (1.) Explain the division of Law into the Law of Persons and the Law of Things.

(2.) Explain the statement that "the separation of the Law of Persons from that of Things has no meaning in the infancy of law."

7. What is, according to Mr. Maine, the connexion between the Roman *Emphyteusis* and feudal tenure?

Appendix, No. 8.

General Class Examination.

8. What is Mr. Maine's account of the origin of the law of primogeniture?

9. Explain Mr. Maine's statement: "It is not because our own Jurisprudence and that of Rome were once alike that they ought to be studied together, it is because they will be alike."

10. Point out the connexion between "the movement from status to contract" and other movements of society shown in changes of law.

POLITICAL ECONOMY.

1. State Mr. M'Culloch's theory of wages.

2. How do you account for the great inequalities in the wages of agricultural labour in the United Kingdom?

3. (1) What are the constituent elements of gross profit?

(2) Of which of these elements does the profit of a bill-broker consist?

4. In what cases does a tithe increase faster than rent, and why?

5. (1) What does Adam Smith mean by the natural distribution of wealth?

(2) Is the wealth of a country distributed in that manner alone?

6. (1) What does Mr. Mill mean by saying that market prices are determined by the equation of supply and demand?

(2) In what cases is there no such equation, and in what cases are different prices its possible consequence?

7. What inconveniences would follow from the absence of money, and the carrying on of trade without it?

8. What is meant by a *double standard?* the *mint price of gold?* the *real exchange?* the *nominal exchange?*

9. On what class does a tax on the profits of a single trade fall, and why?

10. Upon what classes does a general tax on profits fall, and why?

11. How would exclusively indirect taxation accord with, or violate each of Adam Smith's canons, and why?

12. If a law were passed prohibiting all purchases and sales unless on certain stated days throughout the kingdom, how would the amount of money required to carry on a given amount of trade be affected, and why?

HISTORY AND ENGLISH LITERATURE.—*Examiner, Professor Yonge.*

THIRD YEAR STUDENTS.

ESSAY.

POPULAR POETRY CONSIDERED AS A TEST OF NATIONAL CHARACTER.

1. Give a sketch of Bacon's career; and of his chief literary works.

2. Give a sketch of the lyric poetry of the three kingdoms; enumerating in chronological order the chief lyrical poets, and specifying their distinguishing characteristics.

3. Explain the plot of Macbeth;

Or,

Of Julius Cæsar.

Appendix, No. 8.

General Class Examination.

4. Mention some of the incidents in Richard II., in which the poet adheres most closely to history;

Or,

Mention some of the arguments by which Calphurnia endeavoured to deter Cæsar from going to the Senate House; pointing out, and, if possible, illustrating by quotations from the Latin poets, how far her speech agrees with the stories current at Rome.

5. In what departments of literature, are the eras of Queen Anne, and of George III. respectively, especially brilliant?

6. "On what foundation stands the warrior's fame?
"How just his hopes let Swedish Charles proclaim."

Who is the warrior here alluded to? Sketch his career; what is the corresponding example in the original Satire of Juvenal?

Or,

Describe the plan of Chaucer's prologue.

7. What is the metre of the Faerie Queen? Has it been adopted by any poets of the present century?

Or,

Give an epitome of Macaulay's character of Addison.

8. What great English poets have also been eminent as writers of prose?

MODERN HISTORY.

1. Queen Victoria is a descendant of William the Conqueror. Trace the relationship?

2. What is the meaning of the term Conqueror, as applied to William I.?

3. In the four centuries which succeeded the Conquest, what were the chief enactments designed to curb or limit the power of the Pope?

4. What were the chief provisions of Magna Charta? How far were they new?

5. Trace the origin of the British Parliament? Had it any prototype in the Anglo-Saxon times? and, in the age immediately succeeding the Conquest, was there any body in France possessed of at all similar powers?

6. What was the plea on which Edward III. invaded France? Had his previous acts in any degree invalidated it? Mention some of the chief incidents of his war with France.

7. Sketch the career of Robert Bruce.

8. Mention the dates (as nearly as you can) and the leading features of the battles of Lewes, Falkirk, Sluys, Verneuil, Towton, Stoke.

Or,

1. What communications took place between Henry IV. of France, and the contemporary sovereign or sovereigns of England; and with what object?

2. What was the Petition of Right, the Bill of Rights, the Act of Settlement.

3. Describe the cause, and leading features of the Rebellion of the Fronde.

4. Describe the pretexts alleged for the impeachment of Lord Clarendon, and Lord Danby; and discuss the conduct of the king on each occasion.

5. What cardinals filled the chief post in the French Government in the 16th and 17th centuries? describe their characters.

Appendix, No. 8.

General Class Examination.

6. Who were the first Lords of the Treasury in 1706, in 1713, in 1732, in 1752, in August 1765, in August 1766, in 1775, and in 1782, 1783, 1784? Describe the characters of the most eminent.

7. In the debates on the Regency in 1788, what were the positions taken up by the ministry and the opposition, and how far were either supported by precedent?

8. What was Poyning's Act, or the Statute of Drogheda? Under what circumstances was it repealed?

THIRD YEAR STUDENTS.

METAPHYSICS.—*Examiner, Professor Park,* M.A.

*1. Name the chief works, and sketch the principal doctrines of—

(*a*) Bacon, Descartes, or Comte;
(*b*) Leibniz, Brown, or Cousin.

2. State Locke's theory regarding *innate ideas, primary and secondary qualities of bodies, substance, knowledge.*

3. (*a*) "The celebrated hypothesis of Berkeley, so far as it merely denies the existence of matter, is not in any way contrary to common sense . . . . But in admitting one portion of Berkeley's theory as perfectly tenable, we do not thereby accept his entire system of idealism."

(*b*) "The unsophisticated sense of mankind refuses to acknowledge that mind is but a bundle of states of consciousness, as matter is (possibly) a bundle of sensible qualities." Explain these passages historically and critically.

4. What are Kant's *synthetic judgments, ideas of the reason,* and *postulates of the practical reason?*

5. Mention the more important questions that arise in ethical discussions. State as many theories of the moral faculty (or conscience) as you remember.

*6. What are emotions, desires, volitions, and heteropathic states of mind?

"Volition is not identical with desire, and cannot properly be classed with the phenomena of emotion." How does Dean Mansel establish and illustrate this proposition?

[N.B.—The questions which have an asterisk prefixed should not be attempted by those who seek honors.]

1. Define and illustrate automatic movement. Enumerate the chief nervous centres and their respective functions.

2. Define and divide Natural Realism and Cosmothetic Idealism. Explain and criticise Dean Mansel's theory of perception.

*3. Reconcile these statements:—"Whiteness and coldness are no more in snow than pain is." "The sound is in the bell;" "the fire is hot;" "the smell is in the rose."

*4. Illustrate Locke's remark,—"In many cases, by a settled habit, ... we take that for the perception of our sensation which is an idea formed by our judgment."

5. Examine Mr. James Mill's assertion, "We may refer *resemblance* to the law of *frequency,* of which it seems to form only a particular case."

Appendix, No. 8.

General Class Examination.

6. Explain—"Contrast may be analyzed into relativity, contiguity, similarity, and the influence of emotion."

7. What are the laws of General Preference? In what way can the will influence the train of thoughts?

8. State, and examine, some of the arguments adduced to prove unconscious thinking.

9. Show that "in regard to ideas generally it is probable, if not certain, that the renewed feeling, or idea, occupies the same parts, and in the same manner, as the original or actual feeling." Reconcile with this doctrine the fact that Milton's imagination remained after he became blind.

10. What is Mr. Bain's analysis of imagination? Analyze the phenomenon of remembrance.

*11. Enumerate the various meanings attached to the term "Belief" by James Mill, J. S. Mill, Sir W. Hamilton, Dr. M'Cosh, Professor Bain.

12. What are the cardinal questions of Metaphysics? "Experience cannot . . . . enable us to account for such a phenomenon as a necessary thought. Custom and association are founded on Experience." "The characteristic of necessity, rightly understood, does not point to an innate origin." Give a brief, but distinct, critical and historical explanation of these propositions.

[N.B.—The questions which have an asterisk prefixed should not be attempted by those who seek honors.]

Anatomy and Physiology.—*Examiner, Dr. Redfern.*

[First Year Students are required to answer questions 1, 2, 3, 4, 5; Second Year 2, 3, 4, 5, 6; and Third and Fourth Year 3, 4, 5, 6, 7, 8.]

1. Give a short description of connective-tissue corpuscles, bone corpuscles, and the nuclei of striated and non-striated muscular fibre.

2. Mention by name, and describe very briefly the characters of the glands which occur in the mucous membrane of the alimentary canal or immediately under it, from the mouth to the anus.

3. What are the evidences of sensibility and the uses of this property in muscles? Illustrate by instances of absence of sensibility resulting from experiments and disease.

4. How is the temperature of the human body maintained, and by what circumstances is it influenced? What are the effects of extreme heat and cold?

5. What is the amount of force employed in the circulation in arteries and veins, and how is it ascertained? What is the velocity of the circulation in arteries, capillaries, and veins, and how is this determined?

6. Describe the course and distribution of the bronchial arteries, with the veins which bring back their blood. Describe also the capillary plexuses of the air-vesicles, the bronchial tubes, and the pleura.

7. Describe the structures which maintain the connexion of the ovum with the uterus from the period of entrance of the ovum into the uterine cavity to the end of the period of utero-gestation.

8. State the position and characters of the gray matter in the spinal cord, medulla oblongata, pons varolii, crus cerebri, optic thalamus, and corpus striatum.

Appendix, No. 8. — General Class Examination.

PRACTICAL ANATOMY.—*Examiner, Dr. Redfern.*

[In addition to making a dissection, First year Students are required to answer questions 1, 2, 3, 4, 5; Second year, 1, 2, 3, 5, 6; Third and Fourth year, 1, 3, 6, 7, 8.]

1. Describe the ligaments which connect two dorsal vertebræ with each other, and those which attach them to a rib, stating the mode of making the dissection which will expose each ligament.

2. Name the muscles of the leg which are inserted into the bones of the foot, and describe the insertion and action of each.

3. Describe all the attachments,—the direction of the fibres, and the relations of the obliquus internus abdominis muscle.

4. Describe the course, relations and branches of the radial artery from the place where the pulse is felt to the termination of the artery.

5. Give an account of the course, relations and structure of the trachea.

6. Mention in turn each muscle of the gluteal region and thigh, with its nerve and the part of the muscle where the nerve enters to supply it.

7. Describe the great veins at the upper part of the thoracic cavity, with the veins which open into them, as far as these are included in the chest.

8. Give a short account of the parts which can be seen on the base of the cranium after the removal of the encephalon, and mention the position in which the end of each cranial nerve may be seen.

MATERIA MEDICA.—*Examiner, Dr. J. Seaton Reid.*

1. State the proofs in favour of the opinion that medicines are absorbed before they can act on the system.

2. Explain the "Nervous Theory" of the action of medicines.

3. Reply to the objection, "that the action of some medicines is so quick as to preclude the possibility of their being absorbed."

4. What alkaline salts can you associate in a prescription with Sulphas Magnesiæ?

5. Write prescriptions for the foregoing alkaline aperient mixtures for an adult.

6. How would you test the purity of the Potassii Iodidum?

7. What is the best means of preparing the Unguentum Potasii Iodidi?

8. How does a Sedative differ in its action on the Nervous system from a Narcotic?

9. What is the proportion of Opium in the Pulvis Ipecacuanhæ Compositus; Pulvis Kino Compositus; Pulvis Opii Compositus; Pulvis Cretæ Aromaticus *c.* Opio?

10. What are the therapeutic properties of the Hydrate of Chloral?

11. Write a prescription for its use by an adult, and a child 5 years old.

12. Name the medicines on the table, and classify them therapeutically.

SURGERY.—*Examiner, Alexander Gordon,* M.D.

1. Describe the various species of fracture of the bones of the leg, their differential diagnosis, and treatment.

2. Describe the symptoms and treatment of retention of urine from enlargements of the prostate.

3. Describe the differential diagnosis and treatment of tumors of the scalp.

Appendix, No. 8.

General Class Examination.

MIDWIFERY AND DISEASES of WOMEN AND CHILDREN.—*Examiner, Dr. R. F. Dill.*

1. Contrast the fully developed male and female pelvis.

2. Contrast the unimpregnated uterus, and the uterus when it has reached the ninth month of gestation.

3. What is the longest period that Pregnancy has been known to endure? Give the period in days, and cite one or more cases as proof of the answer.

4. What is the shortest period at which a viable child has been born? Give the period and proof in the same manner.

5. What are the principal causes of sterility, and the presumptive evidence of fœcundity in the female?

6. Give the analogous organs of generation in the male and female, and state what is held to contribute all the materials towards the formation of a new being.

7. Describe (by using Baudelocque's terms) Naegelè's different positions of the head.

8. Describe the symptoms and general management of breech presentations. State wherein the labour generally differs from that which occurs in ordinary vertex presentations, and the period when active interference is necessary.

9. In shoulder presentations, and after the rupture of the membranes, what would be your guide as to the exact position of the fœtus in utero? Describe the operations necessary and the processes by which labour has terminated delivery in these presentations, and give the names of the authors who first wrote on the subject.

10. Give the names of the obstetrical instruments used to effect delivery, with their derivations. Give the indications for the use of the forceps, and describe the method of applying them,

11. State the pathology, prognosis, and treatment of puerperal convulsions.

12. Give the symptoms, pathology, prognosis, and treatment of phlegmasia dolens.

13. What are the symptoms, treatment and pathological appearances in a case of strumous meningitis in a child?

14. Write prescriptions, in unabbreviated Latin, for the following cases:

1st. Post partum Dolores.
2nd. Flatulency in a newly-born child.
3rd Amenorrhea.
4th. Anasarca during gestation.

MEDICAL JURISPRUDENCE.—*Examiner, Professor Hodges,* M.D., F.C.S.

1. How is the purity of the copper employed in Reinsch's process to be determined?

2. State the quantity of lead contained in the water supplied to towns which has been found to act injuriously.

3. What is the treatment to be employed in lead poisoning?

4. Mention the chemical antidotes to the following poisons:—Arsenic, Corrosive Sublimate, Lead, Cyanide of Potassium.

5. Describe the signs which are regarded as indicating recent delivery.

Appendix, No. 8.

General Class Examination.

MEDICAL STUDENTS.

FRENCH.—*Examiner, Professor Meissner.*

Translate into French :—

I. At what o'clock do you go to bed? I go to bed at nine o'clock. Have you as many servants as your neighbour? We have more (of them). Which animals are most useful? Horses, oxen, and camels. Have you paid your tailor and mine? I have paid mine this morning, and I will pay his this evening. Have you eaten your apple with a steel-knife? No, I have eaten it with a silver-knife.

II. The shortness of life is a fruitful subject to moralists and sermon writers. By the way, they have made life seem longer by making it duller. But this shortness of life is seldom appreciated by busy men of the world. Almost everybody's plans are laid down on too large a scale. On this point, Horace is good reading ; and a living statesman has summed up life, when he wrote : " youth is a blunder, manhood a struggle, old age a regret." He might, however, have appointed the three evils to each stage of life, and not have been very far from the truth.—ARTHUR HELPS.

Translate into English :—

II. Mon maître avait dressé, pour mon usage, quelques dialogues arabes, qui contenaient, par demandes et par réponses, des compliments, des questions, et différents sujets de conversation, par exemple : Bon jour, monsieur ; comment vous portez-vous?—Fort bien, à vous servir. Il y a long-temps que je ne vous ai vu.—J'ai été à la campagne, etc.

Un jour, on vint m'avertir qu'on me demandait à la porte du séminaire. Je descends, et me vois entouré de dix ou douze principaux négociants de Marseille. Ils amenaient avec eux une espèce de mendiant qui était venu les trouver à la Loge (à la Bourse) : il leur avait raconté qu'il était Juif de naissance, qu'on l'avait élevé à la dignité de rabin, mais que, pénétré des vérités de l'Evangile, il s'était fait Chrétien ; qu'il était instruit des langues orientales, et que, pour s'en convaincre, on pouvait le mettre aux prises avec quelque savant. Ces messieurs ajoutèrent avec politesse, qu'ils n'avaient pas hésité à me l'amener. Je fus tellement effrayé, qu'il m'en prit la sueur froide. Je cherchais à leur prouver qu'on n'apprend pas ces langues pour les parler, lorsque cet homme commença tout à coup l'attaque avec une intrépidité qui me confondit d'abord. Je m'aperçus, heureusement, qu'il récitait en Hébreu le premier psaume de David, que je savais par cœur. Je lui laissai dire le premier verset, et je ripostai par un de mes dialogues arabes. Nous continuâmes, lui par le deuxième verset du psaume, moi par la suite du dialogue. La conversation devint plus animée ; nous parlions tous deux à la fois et avec la même rapidité. Je l'attendais à la fin du dernier verset : il se tut en effet ; mais pour m'assurer l'honneur de la victoire, j'ajoutai encore une ou deux phrases, et je dis à ces messieurs, que cet homme méritait, par ses connaissances et par ses malheurs, d'intéresser leur charité. Pour lui, il leur dit dans un mauvais baragouin, qu'il avait voyagé en Espagne, en Portugal, en Allemagne, en Italie, en Turquie, et qu'il n'avait jamais vu un si habile homme que ce jeune abbé. J'avais alors vingt-et-un ans.—BARTHELEMY.

Appendix, No. 8.

General Class Examination.

Translate :

Malheur, malheur à qui dans cette mer profonde
Du cœur de l'homme jette imprudemment la sonde !
Car le plomb bien souvent, au lieu de sable d'or,
De coquilles de nacre aux beaux reflets de moire,
N'apporte sur le pont que boue infecte et noire.
—Oh ! si je pouvais vivre une autre vie encor !
Certes, je n'irais pas fouiller dans chaque chose
Comme j'ai fait.—Qu'importe après tout que la cause
Soit triste, si l'effet qu'elle produit est doux ?
—Jouissons, faisons-nous un bonheur de surface ;
Un beau masque vaut mieux qu'une vilaine face.
—Pour quoi l'arracher, pauvres fous ?

GAUTIER.

GREEK.—*Examiner, Professor MacDouall.*

FIRST YEAR STUDENTS.

Translate accurately the following extract from the *Cyropaedeia* of XENOPHON :—

ἐπεὶ δ' οὖν ἔγνω ὁ Ἀστυάγης σφόδρα αὐτὸν ἐπιθυμοῦντα[2] ἔξω θηρᾶν,[1] ἐκπέμπει αὐτὸν σὺν τῷ θείῳ, καὶ φύλακας συμπέμπει ἐφ' ἵππων πρεσβυτέρους, ὅπως ἀπὸ τῶν δυσχωριῶν φυλάττοιεν αὐτόν, καὶ εἰ τῶν ἀγρίων τι φανείη[1] θηρίων. ὁ οὖν Κῦρος τῶν ἑπομένων προθύμως ἐπυνθάνετο[1] ποίοις οὐ χρὴ θηρίοις πελάζειν καὶ ποῖα χρὴ θαρροῦντα διώκειν. οἱ δ' ἔλεγον ὅτι τὰς δυσχωρίας φυλάττεσθαι δέοι[3] οὐδὲν ἧττον ἢ τὰ θηρία· πολλοὺς γὰρ ἤδη αὐτοῖς[3] τοῖς[3] ἵπποις[3] κατακρημνισθῆναι. ὡς δὲ εἶδεν ὁ Κῦρος ἔλαφον ἐκπηδήσασαν, πάντων ἐπιλαθόμενος[1] ὧν[3] ἤκουσεν ἐδίωκεν οὐδὲν ἄλλο ὁρῶν ἢ ὅπῃ ἔφευγε. καί πως διαπηδῶν αὐτῷ ὁ ἵππος πίπτει εἰς γόνατα καὶ μικροῦ[3] κἀκεῖνον ἐξετραχήλισεν.[2] οὐ μὴν ἀλλ' ἐπέμεινεν[1] ὁ Κῦρος μόλις πως, καὶ ὁ ἵππος ἐξανέστη.[1] ὡς δὲ εἰς τὸ πεδίον[2] ἦλθεν, ἀκοντίσας καταβάλλει τὴν ἔλαφον—καλόν τι χρῆμα καὶ μέγα. καὶ ὁ μὲν δὴ ὑπερέχαιρεν· οἱ δὲ φύλακες προσελάσαντες[1] ἐλοιδόρουν αὐτὸν[3] καὶ ἔλεγον εἰς οἷον κίνδυνον ἔλθοι,[3] καὶ ἔφασαν[1] κατερεῖν[1] αὐτοῦ.[3] ὁ οὖν Κῦρος εἱστήκει[1] καταβεβηκώς, καὶ ἀκούων ταῦτα ἠνιᾶτο.[1] ὡς δ' ᾔσθετο[1] κραυγῆς,[3] ἀνεπήδησεν ἐπὶ τὸν ἵππον ὥσπερ ἐνθουσιῶν,[2] καί, ὡς εἶδεν ἐκ τοῦ ἀντίου κάπρον προσφερόμενον, ἀντίος ἐλαύνει καὶ διατεινάμενος[1] εὐστόχως[2] βάλλει εἰς τὸ μέτωπον[2] καὶ κατέσχε[1] τὸν κάπρον. ἐνταῦθα μέντοι ἤδη καὶ ὁ θεῖος αὐτῷ[3] ἐλοιδορεῖτο τὴν θρασύτητα ὁρῶν. ὁ δ' αὐτοῦ[3] λοιδορουμένου[3] ὅμως ἐδεῖτο, ὅσα αὐτὸς ἔλαβε, ταῦτα ἐᾶσαι εἰσκομίσαντα[3] δοῦναι τῷ πάππῳ.

1. Parse *fully* every word to which the figure 1 is attached, giving the future, perfect, and aorist, when used in Attic prose.
2. Derive or decompound every word to which the figure 2 is attached.
3. Account for the case of every noun and the mode of every verb to which the figure 3 is attached.

Appendix, No. 8.

General Class Examination.

SECOND YEAR STUDENTS.

Translate perspicuously the annexed passage from the *Anabasis* of XENOPHON :—

τὸ δὲ χωρίον τοῦτο, ὃ καλεῖται ‘Κάλπης λιμήν,’ ἔστι μὲν ἐν τῇ Θρᾴκῃ τῇ ἐν τῇ Ἀσίᾳ· ἀρξαμένη δὲ ἡ Θρᾴκη αὕτη ἐστὶν ἀπὸ τοῦ στόματος τοῦ Πόντου μέχρι Ἡρακλείας ἐπὶ δεξιὰ εἰς τὸν Πόντον εἰσπλέοντι. καὶ τριήρει μὲν εἰς Ἡράκλειαν ἐκ Βυζαντίου κώπαις ἡμέρας μακρᾶς πλοῦς· ἐν δὲ τῷ μέσῳ ἄλλη πόλις οὐδεμία οὔτε φιλία οὔτε Ἑλληνίς, ἀλλὰ Θρᾷκες Βιθυνοί, οἳ οὓς ἂν τῶν Ἑλλήνων ἐκπίπτοντας ἢ ἄλλως πως λάβωσι δεινὰ ὑβρίζειν λέγονται. ὁ δὲ Κάλπης λιμὴν ἐν μέσῳ μὲν κεῖται ἑκατέρωθεν πλεόντων ἐξ Ἡρακλείας καὶ Βυζαντίου, ἔστι δ' ἐν τῇ θαλάττῃ προκείμενον χωρίον, τὸ μὲν εἰς τὴν θάλατταν καθῆκον αὐτοῦ πέτρα ἀπορρὼξ ὕψος ὅπῃ ἐλάχιστον οὐ μεῖον εἴκοσιν ὀργυιῶν, ὁ δὲ αὐχὴν ὁ εἰς τὴν γῆν ἀνήκων μάλιστα τεττάρων πλέθρων τὸ εὖρος· τὸ δ' ἐντὸς τοῦ αὐχένος χωρίον ἱκανὸν μυρίοις ἀνθρώποις. λιμὴν δ' ἐστὶν ὑπ' αὐτῇ τῇ πέτρᾳ τὸ πρὸς ἑσπέραν αἰγιαλὸν ἔχων· κρήνη δὲ ἡδέος ὕδατος καὶ ἄφθονος ῥέουσα ἐπ' αὐτῇ τῇ θαλάττῃ ὑπὸ τῇ ἐπικρανείᾳ τοῦ χωρίου· ξύλα δὲ πολλὰ μὲν καὶ ἄλλα πάνυ δὲ πολλὰ καὶ καλὰ ναυπηγήσιμα. τὸ δὲ ὄρος εἰς μεσόγειαν μὲν ἀνήκει ὅσον ἐπὶ εἴκοσι σταδίους, καὶ τοῦτο γεῶδες καὶ ἄλιθον· τὸ δὲ παρὰ θάλατταν πλέον ἢ ἐπὶ εἴκοσι σταδίους δασὺ πολλοῖς καὶ παντοδαποῖς καὶ μεγάλοις ξύλοις. ἐσκήνουν δ' ἐν τῷ αἰγιαλῷ πρὸς τῇ θαλάττῃ· εἰς δὲ τὸ πόλισμα ἂν γενόμενον χωρίον οὐκ ἐβούλοντο στρατοπεδεύεσθαι, ἀλλὰ ἐδόκει καὶ τὸ ἐλθεῖν ἐνταῦθα ἐξ ἐπιβουλῆς εἶναι, βουλομένων τινῶν κατοικίσαι πόλιν.

Append brief notes illustrating the geographic details and any other points of interest.

ADVANCED CLASS.

I.—Translate perspicuously the annexed extract from the Fifth Book of THUCYDIDES :—

ἐπειδὴ δὲ καὶ ἡ ἐν Ἀμφιπόλει ἧσσα τοῖς Ἀθηναίοις ἐγεγένητο καὶ ἐτεθνήκει Κλέων τε καὶ Βρασίδας,—οἵπερ ἀμφοτέρωθεν μάλιστα ἠναντιοῦντο τῇ εἰρήνῃ, ὁ μὲν διὰ τὸ εὐτυχεῖν τε καὶ τιμᾶσθαι ἐκ τοῦ πολεμεῖν, ὁ δὲ γενομένης ἡσυχίας καταφανέστερος νομίζων ἂν εἶναι κακουργῶν καὶ ἀπιστότερος διαβάλλων,—τότε οἱ ἐν ἑκατέρᾳ τῇ πόλει σπεύδοντες τὰ μάλιστα τὴν ὁμολογίαν, Πλειστοάναξ τε ὁ Παυσανίου βασιλεὺς Λακεδαιμονίων καὶ Νικίας ὁ Νικηράτου πλεῖστα τῶν τότε εὖ φερόμενος ἐν στρατηγίαις, πολλῷ δὴ μᾶλλον προεθυμοῦντο· Νικίας. μὲν βουλόμενος, ἐν ᾧ ἀπαθὴς ἦν παὶ ἠξιοῦτο, διασώσασθαι τὴν εὐτυχίαν, καὶ ἔς τὸ αὐτίκα πόνων πεπαῦσθαι αὐτὸς καὶ τοὺς πολίτας παῦσαι, καὶ τῷ μέλλοντι χρόνῳ καταλιπεῖν ὄνομα ὡς οὐδὲν σφήλας τὴν πόλιν διεγένετο, νομίζων ἐκ τοῦ ἀκινδύνου τοῦτο ξυμβαίνειν ὅστις ἐλάχιστα τύχῃ αὑτὸν παροδίδωσι τὸ δὲ ἀκίνδυνον τὴν εἰρήνην παρέχειν· Πλειστοάναξ δὲ ὑπὸ τῶν ἐχθρῶν διαβαλλόμενος περὶ τῆς καθόδου, καὶ ἐς ἐνθυμίαν τοῖς Λακεδαιμονίοις ἀεὶ προβαλλόμενος ὑπ' αὐτῶν, ὁπότε τι πταίσειαν, ὡς διὰ τὴν ἐκείνου καθόδον παρανομηθεῖσαν ταῦτα ξυμβαίνοι. τὴν γὰρ πρόμαντιν τὴν ἐν Δελφοῖς ἐπῃτιῶντο αὐτὸν πεῖσαι μετ' Ἀριστοκλέους τοῦ ἀδελφοῦ ὥστε τάδε χρῆσαι Λακεδαιμονίοις ἐπὶ πολὺ θεωροῖς

Appendix, No. 8.

General Class Examination.

ἀφικνουμένοις, "Διὸς υἱοῦ ἡμιθέου τὸ σπέρμα ἐκ τῆς ἀλλοτρίας ἐς τὴν ἑαυτῶν ἀναφέρειν, εἰ δὲ μή, ἀργυρέᾳ εὐλάκᾳ εὐλάξειν·" χρόνῳ δὲ προτρέψαι τοὺς Λακεδαιμονίους φεύγοντα αὐτὸν ἐς Λύκαιον διὰ τὴν ἐκ τῆς Ἀττικῆς ποτὲ μετὰ δωροδοκίαν ἀναχώρησιν, καὶ ἥμισυ τῆς οἰκίας τοῦ ἱεροῦ τοῦ Διὸς οἰκοῦντα φόβῳ τῶν Λακεδαιμονίων, ἔτει ἑνὸς δέοντι εἰκοστῷ ὁμοίοις χοροῖς καὶ θυσίαις καταγαγεῖν ὥσπερ ὅτε τὸ πρῶτον Λακεδαίμονα κτίζοντες τοὺς βασιλέας καθίσταντο. ἀχθόμενος οὖν τῇ διαβολῇ ταύτῃ, καὶ νομίζων ἐν εἰρήνῃ μὲν οὐδενὸς σφάλματος γιγνομένου καὶ ἅμα τῶν Λακεδαιμονίων τοὺς ἄνδρας κομιζομένων κἂν αὐτὸς τοῖς ἐχθροῖς ἀνεπίληπτος εἶναι, πολέμου δὲ καθεστῶτος ἀεὶ ἀνάγκην εἶναι τοὺς προὔχοντας ἀπὸ τῶν ξυμφορῶν διαβάλλεσθαι, προὐθυμήθη τὴν ξύμβασιν.

N.B.—If any where a reading be followed different from that given above, it should be specified.

II.—1. Elucidate succinctly both the transactions which are narrated and those which are referred to in this passage.

2. (*a*) Date, both by Olympic years and by years B. C., the ἀναχώρησις, the φυγή, and the κάθοδος of Pleistoanax, the ἧσσα at Amphipolis, and the ξύμβασις and ξυμμαχία which followed. (*b*) Date likewise the two σπονδαὶ concluded by Argos—first with Athens, then with Sparta—the texts of which are exhibited in this Fifth Book. (*c*) Report Thucydides' reckoning of what he styles ὁ πρῶτος πόλεμος ὅδε and any other chronological computations in this Book.

LATIN.—*Examiner, Professor William Nesbitt*, M.A.

FIRST YEAR STUDENTS.

1. Translate:

Hoc primum cum Hannibale proelium fuit, quo facile apparuit et equitatu meliorem Poenum esse, et ob id campos patentis, quales sunt inter Padum Alpesque, bello gerendo Romanis aptos non esse. Itaque proxima nocte iussis militibus vasa silentio colligere castra ab Ticino mota festinatumque ad Padum est, ut ratibus, quibus iunxerat flumen, nondum resolutis sine tumultu atque insectatione hostis copias traiceret. Prius Placentiam pervenere quam satis sciret Hannibal ab Ticino profectos: tamen ad sexcentos moratorum in citeriore ripa Padi segniter ratem solventes cepit. Transire pontem non potuit, ut extrema resoluta erant, tota rate in secundam aquam labente. Coelius auctor est Magonem cum equitatu et Hispanis peditibus flumen extemplo transnasse, ipsum Hannibalem per superiora Padi vada exercitum traduxisse elephantis in ordinem ad sustinendum impetum fluminis oppositis. Ea peritis amnis eius vix fidem fecerint, nam neque equites armis equisque salvis tantam vim fluminis superasse veri simile est, ut iam Hispanos omnes inflati travexerint utres; et multorum dierum circuitu Padi vada petenda fuerint, qua exercitus gravis impedimentis traduci posset. Potiores apud me auctores sunt, qui biduo vix locum rate iungendo flumini inventum tradunt; ea cum Magone equites Hispanorum expeditos praemissos.

LIVY, xxi., 47.

(*a*) Give the principal tenses of the verbs *gero*, *colligo*, *resolvo*, *traicio*, *sustineo*, *trado*, *praemitto*, decompounding those that are compound, and explaining the changes in their letters.

(*b*) Give the Greek equivalent of *vasa colligere*, and the opposite of *in ecundam aquam* (derive *secundus*).

(*c*) Explain the constructions *bello gerendo*, and *ut travexerint*; and he use of the subjunctive mood in *petenda fuerint*.

Appendix, No. 8.

General Class Examination.

2. Translate :

Etenim si mecum patria, quae mihi vita mea multo est carior, si cuncta Italia, si omnis res publica loquatur : M. Tulli, quid agis? Tune eum, quem esse hostem comperisti, quem ducem belli futurum vides, quem exspectari imperatorem in castris hostium sentis, auctorem sceleris, principem coniurationis, evocatorem servorum et civium perditorum, exire patiere, ut abs te non emissus ex urbe, sed immissus in urbem esse videatur? Non hunc in vincula duci, non ad mortem rapi, non summo supplicio mactari imperabis? Quid tandem te impedit? Mosne maiorum? At persaepe etiam privati in hac re publica perniciosos cives morte multaverunt. An leges, quae de civium Romanorum supplicio rogatae sunt? At numquam in hac urbe qui a re publica defecerunt civium iura tenuerunt. An invidiam posteritatis times? Praeclaram vero populo Romano refers gratiam, qui te hominem per se cognitum, nulla commendatione maiorum, tam mature ad summum imperium per omnis honorum gradus extulit, si propter invidiam aut alicuius periculi metum salutem civium tuorum negligis.

Cicero, *In Catilinam*, I., 11–27.

(*a*) Write short notes on *emissus—immissus*, *mactari imperabis*, *mos majorum*, *posteritatis*.

(*b*) There is much rhetorical exaggeration in *persaepe*? Justify the expression *tam mature*.

(*c*) Enumerate the *leges quae de civium Romanorum supplicio rogatae sunt*. State the argument repeatedly urged by Cicero to show that they were inapplicable to the Catilinarian conspirators.

FOR PASS.

I praise those men who have devoted themselves to active life (*se rebus agendis dare*), and who have not refused to undertake any burden on behalf of the commonwealth. But yet they whose whole life has been spent in philosophy have contributed something to the benefit of mankind. Lysis is a witness of this, who educated the Theban Epaminondas. Plato in like manner is a witness, whom Dion had as a master : and many others are witnesses, through whose instruction princes have well administered public affairs. Nor do they only when alive and present teach their disciples by precepts ; but after death also they leave monuments of literature, by means of which the laws of the citizens may for ever be amended, and their manners corrected.

FOR HONORS.

Translate into Latin prose :

A drop of water fell out of a cloud into the sea, and finding itself lost in such an immensity of fluid matter, broke out into the following reflection : " Alas! what an inconsiderable creature am I in this prodigious ocean of waters! My existence is of no concern to the universe, I am reduced to a kind of nothing, and am less than the least of the works of God." It so happened that an oyster, which lay in the neighbourhood of this drop, chanced to gape and swallow it up in the midst of this its

Appendix, No. 8.
General Class Examination.

humble soliloquy. The drop, says the fable, lay a great while hardening in the shell, until by degrees it was refined into a pearl, which falling into the hands of a diver, after a long series of adventures, is at present that famous pearl which is fixed in the Persian diadem.

ADDITIONAL FOR HONORS.

Translate :

CH. Quam obrem istuc Syre?
Nam prorsum nil intellego. SY. Vah, tardus es.
CH. Fortasse. SY. Argentum dabitur ei ad nuptias,
Aurum atque uestem qui. . tenesne? CH. Comparet?
SY. Id ipsum. CH. At ego illi neque do neque despondeo.
SY. Non? quamobrem? CH. Quamobrem? me rogas? homini—? SY. Vt lubet.
Non ego dicebam in perpetuom ut illam illi dares,
Verum ut simulares. CH. Non meast simulatio:
Ita tu istaec tua misceto, ne me admisceas.
Ego quoi daturus non sum, ut ei despondeam?
SY. Credebam. CH. Minume. SY. Scite poterat fieri:
Et ego hoc, quia dudum tu tanto opere suaseras,
Eo coepi. CH. Credo. SY. Ceterum equidem istuc, Chremes,
Aequi bonique facio. CH. Atqui cum maxume
Volo te dare operam ut fiat, uerum alia uia.

TERENCE, *Heauton*, IV., 3, 27-41.

CH. Vbi Clitipho hic est? SY. 'Eccum me' inque. CL. Eccum hic tibi.
CH. Quid rei esset dixti huic? SY. Dixi pleraque omnia.
CH. Cape hoc argentum ac defer. SY. I: quid stas, lapis?
Quin accipis? CL. Cedo sane. SY. Sequere hac me ocius:
Tu hic nos, dum eximus, interea opperibere:
Nam nil est illic quod moremur diutius.
CH. Minas quidem iam decem habet a me filia,
Quas pro alimentis esse nunc duco datas:
Hasce ornamentis consequentur alterae:
Porro haec talenta dotis adposcunt duo.
Quam multa, iusta iniusta, fiunt moribus!
Mihi nunc relictis rebus inueniundus est
Aliquis, labore inuenta mea quoi dem bona.

Ibid., IV., 5, 1-13.

(*a*) Write brief notes on *aequi bonique facio; cum maxime; eccum me; quin accipis* (state and explain the various constructions of *quin*); *dum eximus.*

(*b*) Give Bentley's explanation of the passage *minas——duo.* What was the value of the Attic drachma, mina, and talent. Compare the Latin spelling of the two first with the Greek.

(*c*) Scan all the lines of the last extract, explaining any so-called metrical licenses which you may observe.

His animadversis terram multo ante memento
Excoquere et magnos scrobibus concidere montis,
Ante supinatas aquiloni ostendere glaebas,
Quam laetum infodias vitis genus. Optuma putri

Appendix, No. 8.

General Class Examination.

Arva solo: id venti curant gelidaeque pruinae
Et labefacta movens robustus iugera fossor.
Ac si quos haud ulla viros vigilantia fugit,
Ante locum similem exquirunt, ubi prima paretur
Arboribus seges et quo mox digesta feratur,
Mutatam ignorent subito ne semina matrem.
Quin etiam caeli regionem in cortice signant,
Ut, quo quaeque modo steterit, qua parte calores
Austrinos tulerit, quae terga obverterit axi,
Restituant: adeo in teneris consuescere multum est,
Collibus an plano melius sit ponere vitem,
Quaere prius. Si pinguis agros metabere campi,
Densa sere; in denso non segnior ubere Bacchus;
Sin tumulis adclive solum collisque supinos,
Indulge ordinibus, nec setius omnis in unguem
Arboribus positis secto via limite quadret.

Virgil, *Georg.*, II., 259–278.

(*a*) Explain accurately the constructions, *locum similem——feratur; densa sere; in denso——Bacchus; nec setius——quadret.*

(*b*) Give the etymology of *regio, uber, segnis, indulge, setius, collis, via.* Explain and illustrate the connexion of *coquo* and *πέπτω.*

Translate into Latin Hexameters:—

Thus saying, from her husband's hand her hand
Soft she withdrew; and like a wood-nymph light
Oread or Dryad, or of Delia's train,
Betook her to the groves; but Delia's self
In gait surpassed, and goddess-like deport,
Though not as she with bow and quiver armed;
But with such gardening tools as art, yet rude,
Guiltless of fire, had formed, or angels brought.
To Pales or Pomona, thus adorned,
Likest she seemed, Pomona, when she fled,
Vertumnus, or to Ceres in her prime,
Yet virgin of Proserpina from Jove.

SECOND YEAR STUDENTS.

A.—Translate:—

1. Quid? si per quindecim annos, grande mortalis aevi spatium, multi fortuitis casibus, promptissimus quisque saevitia principis interciderunt, pauci, ut ita dixerim, non modo aliorum sed etiam nostri superstites sumus, exemptis e media vita tot annis, quibus iuvenes ad senectutem, senes prope ad ipsos exactae aetatis terminos per silentium venimus.

Tacitus, *Agricola*, 3.

2. Ceterum Britanniam qui mortales initio coluerint, indigenae an advecti, ut inter barbaros, parum compertum. Habitus corporum varii atque ex eo argumenta. Namque rutilae Caledoniam habitantium comae, magni artus Germanicam originem adseverant. Silurum colorati vultus, torti plerumque crines, et posita contra Hispania Hiberos veteres traiecisse easque sedes occupasse fidem faciunt. Proximi Gallis et similes sunt, seu durante originis vi, seu procurrentibus in diversa terris positio caeli corporibus habitum dedit. In universum tamen aestimanti Gallos vicinam insulam occupasse credibile est. Eorum sacra deprehendas, superstitionum persuasiones; sermo haud multum diversus; in deposcendis periculis eadem audacia et, ubi advenere, in detrectandis eadem formido.

Ibid., 11.

Appendix, No. 8.

General Class Examination.

3. Aleam, quod mirere, sobrii inter seria exercent, tanta lucrandi perdendive temeritate ut, cum omnia defecerunt, extremo ac novissimo iactu de libertate ac de corpore contendant. Victus voluntariam servitutem adit; quamvis iuvenior, quamvis robustior, adligari se ac venire patitur. Ea est in re prava pervicacia; ipsi fidem vocant. Servos condicionis huius per commercia tradunt, ut se quoque pudore victoriae exsolvant.

TACITUS, *Germania*, 24.

(*a*) Explain the following constructions:—*nostri superstites; in universum aestimanti; eorum sacra deprehendas; in deposcendis periculis.* Tacitus seems to have used the less usual comparative *juvenior* (see third extract) with design. Give the different meanings of the word *fides.* Derive *pervicacia, sobrius, exerceo.*

(*b*) What note of time have we to fix the date of the composition of the Life of Agricola?

B.—Translate:—

Candidus insuetum miratur limen Olympi
Sub pedibusque videt nubes et sidera Daphnis.
Ergo alacris silvas et cetera rura voluptas
Panaque pastoresque tenet Dryadasque puellas.
Nec lupus insidias pecori nec retia cervis
Ulla dolum meditantur; amat bonus otia Daphnis.
Ipsa lætitia voces ad sidera iactant
Intonsi montes; ipsae iam carmina rupes,
Ipsa sonant arbusta: deus, deus ille, Menalca!
Sis bonus o felixque tuis! en quattuor aras:
Ecce duas tibi, Daphni, duas altaria Phœbo.
Pocula bina novo spumantia lacte quot annis
Craterasque duos statuam tibi pinguis olivi.
Et multo in primis hilarans convivia Baccho,
Ante focum, si frigus erit, si messis, in umbra,
Vina novum fundam calathis Ariusia nectar.
Cantabunt mihi Damoetas et Lyctius Aegon,
Saltantis Satyros imitabitur Alphesiboeus.
Haec tibi semper erunt, et cum sollemnia vota
Reddemus Nymphis et cum lustrabimus agros.

VIRG., *Ecl.*, V., 56–75.

(*a*) Give the principal tenses of *suesco, teneo, tondeo, sono, fundo.* Explain the words *crater* and *calathus*, and decline the former. Distinguish *ara* and *altare.*

(*b*) Who is represented by Daphnis, the ideal shepherd? What is the relation of Menalca's song to that of Mopsus? Explain the allusion in *cum lustrabimus agros*, and the epithet *Ariusia.*

FOR PASS.

C.—Translate into Latin Prose:—

To ascertain this, before he ran any risk, thinking it the fitting course, he sends Caius Volusenus in advance in a man-of-war (*longa navis*). He charges him to return to him as soon as possible after he had made all these investigations. Cæsar himself, with all his forces, marches to the country of the Morini, as from thence the passage into Britain was the shortest. Hither he bids assemble ships from all sides from among the neighbouring districts, and the fleet which he had raised for the Venetic war. Meanwhile his plan having become known, and news of it having been carried over to the Britons by the traders, ambassadors come to him from a considerable number of states in the island to promise to give hostages, and to submit to the government of the Roman people.

Appendix, No. 8.
——
General Class Examination.

ADDITIONAL FOR HONORS.

1. Translate :—

Zeno igitur ita naturam definit, ut eam dicat ignem esse artificiosum ad gignendum progredientem via. Censet enim artis maxime proprium esse creare et gignere, quodque in operibus nostrarum artium manus efficiat, id multo artificiosius naturam efficere, id est, ut dixi, ignem artificiosum, magistrum artium reliquarum. Atque hac quidem ratione omnis natura artificiosa est, quod habet quasi viam quandam et sectam, quam sequatur. Ipsius vero mundi, qui omnia complexu suo coercet et continet, natura non artificiosa solum, sed plane artifex ab eodem Zenone decitur, consultrix et provida utilitatem opportunitatumque omnium. Atque ut caeterae naturae suis seminibus quaeque gignuntur, augescunt, continentur, sic natura mundi omnes motus habet voluntarios conatusque et appetitiones, quas ὁρμὰς Graeci vocant, et his consentaneas actiones sic adhibet ut nosmet ipsi, qui animis movemur et sensibus. Talis igitur mens mundi quum sit ob eamque causam vel prudentia vel providentia appellari recte possit—Graece enim πρόνοια dicitur—haec potissimum providet et in his maxime est occupata, primum ut mundus quam aptissimus sit ad permanendum, deinde ut nulla re egeat, maxime autem ut in eo eximia pulcritudo sit atque omnis ornatus.

Cic., *De Nat. Deor.*, II., 22.

(*a*) Distinguish *artificiosus* and *artifex*, and explain the statement that Nature is "*magistra artium reliquarum.*"

(*b*) Explain from this passage the Stoical conception of the deity, and point out in what sense they admitted a plurality of gods.

(*c*) State the four grounds from which Cleanthes deduced belief in the existence of the gods.

2. Translate into Latin prose :—

If you ask me of the being or nature of God, I will follow the example of an ancient philosopher, who, when a tyrant had put this question to him, asked a day to consider ; when the next day, he asked him the same question, asked two days ; and so kept doubling the number of days, till the king marvelled and asked him why he did so. "Because," said he "the longer I consider the matter the harder it seems to me." That ancient philosopher, who is said to have been in many respects a wise and learned man, because many and subtle suggestions occurred to him, doubted which of them was the truest, and so despaired of arriving at the absolute truth. And why does your master Epicurus (for I had rather argue with him than you) hold language unworthy a man of ordinary sense, much more a philosopher ? For the first question, in a discussion concerning the nature of the gods, is whether there are gods or no ? Therefore I, pontiff as I am, and holding that the ceremonies and rites of religion should be most scrupulously observed, should yet be glad to have this point, which is the first in order, established, so that I should entertain it not as an opinion, but as an assured conviction.

3. Translate into Latin Hexameters : .

Weep no more, woful shepherds, weep no more,
For Lycidas your sorrow is not dead,
Sunk though he be beneath the watery floor ;

Appendix, No. 8.

General Class Examination.

So sinks the day-star in the ocean bed,
And yet anon repairs his drooping head,
And tricks his beams, and with new spangled ore
Flames in the forehead of the morning sky:
So Lycidas sunk low, but mounted high
Through the dear might of him that walked the waves.

THIRD YEAR STUDENTS.

HONOR CLASS.

I. Translate:

1. Ego autem ipse, di boni! quo modo *ἐνεπερπερευσάμην* novo auditori Pompeio! Si umquam mihi *περίοδοι ἢ καμπαὶ ἢ ἐνθυμήματα ἢ κατασκευαὶ* suppeditaverunt, illo tempore. Quid multa? Clamores. Etenim haec erat *ὑπόθεσις*, de gravitate ordinis, de equestri concordia, de consensione Italiae, de intermortuis reliquiis coniurationis, de vilitate, de otio. Nosti iam in hac materia sonitus nostros: tanti fuerunt, ut ego eo brevior sim, quod eos usque istim exauditos putem. Romanae autem se res sic habent: senatus *Ἄρειος πάγος*. Nihil constantius, nihil severius, nihil fortius. Nam quum dies venisset rogationi ex senatus consulto ferendae, concursabant barbatuli iuvenes, totus ille grex Catilinae, duce filiola Curionis, et populum, ut antiquaret, rogabant. Piso autem consul, lator rogationis, idem erat dissuasor. Operae Clodianae pontes occuparant: tabellae ministrabantur ita, ut nulla daretur UTI ROGAS. Hic tibi rostra Cato advolat, convicium Pisoni consuli mirificum facit, si id est convicium, vox plena auctoritatis, plena denique salutis.—Cic., *Ad Att.*, I., 14, 4.

Give the Latin equivalents of the rhetorical terms in this passage. Explain the words *suppedito, vilitas, rogatio, antiquo, pontes, tabellae*; also the use of the dative in the phrase *hic tibi rostra C. advolat.* Cite Cicero's description of the *barbatuli juvenes* in the second oration against Catiline.

2. Ecce aliae deliciae equitum vix ferendae! quas ego non solum tuli, sed etiam ornavi. Asiani, qui de censoribus conduxerunt, questi sunt in senatu se cupiditate prolapsos nimium magno conduxisse: ut induceretur locatio, postulaverunt. Ego princeps in adiutoribus atque adeo secundus. Nam, ut illi auderent hoc postulare, Crassus eos impulit. Invidiosa res, turpis postulatio et confessio temeritatis. Summum erat periculum ne, si nihil impetrassent, plane alienarentur a senatu. Huic quoque rei subventum est maxime a nobis perfectumque, ut frequentissimo senatu et libentissimo uterentur, multaque a me de ordinum dignitate et concordia dicta sunt Kal. Decembr. et postridie. Neque adhuc res confecta est, sed voluntas senatus perspecta.—*Ibid.*, 17, 9.

Meaning of the word *deliciae?* In what year was the request above mentioned made? Who was principally opposed to it? Through whose means was it ultimately conceded? Why did Cicero attach so much importance to it?

3. De Tadiana re, mecum Tadius locutus est te ita scripsisse, nihil esse iam quod laboraretur, quoniam hereditas usu capta esset. Id mirabamur te ignorare, de tutela legitima, in qua dicitur esse puella, nihil usu capi posse.—*Ibid.*, 5, 6.

What was *tutela legitima?* Explain the point of law upon which Cicero says that Atticus was in error.

4. Domum Rabirianam M. Fonteius emit HS. CCCIↃↃↃ $\overline{\text{XXX}}$. Reduce to English money the sum mentioned in this passage, and explain the notation.

II.—Translate:

1. Hortensius igitur quum admodum adolescens orsus esset in foro dicere, celeriter ad maiores causas adhiberi coeptus est; quamquam inciderat in Cottae et Sulpicii aetatem, qui annis decem maiores, excellente tum Crasso et Antonio, dein Philippo, post Iulio, cum his ipsis dicendi gloria comparabatur. Primum memoria tanta, quantam in nullo cognovisse me arbitror, ut quae secum commentatus esset, ea sine scripto verbis eisdem redderet, quibus cogitavisset. Hoc adiumento ille tanto sic utebatur, ut sua et commentata et scripta et nullo referente omnia adversariorum dicta meminisset. Ardebat autem cupiditate sic, ut in nullo umquam flagrantius studium viderim. Nullum enim patiebatur esse diem quin aut in foro diceret aut meditaretur extra forum. Saepissime autem eodem die utrumque faciebat. Attuleratque minime vulgare genus dicendi: duas quidem res quas nemo alius; partitiones, quibus de rebus dicturus esset, et collectiones, memor et quae essent dicta contra, quæque ipse dixisset. Erat in verborum splendore elegans, compositione aptus, facultate copiosus; eaque erat quum summo ingenio tum exercitationibus maximis consecutus. Rem complectebatur memoriter, dividebat acute, nec prætermittebat fere quidquam, quod esset in causa aut ad confirmandum aut ad refellendum. Vox canora et suavis: motus et gestus etiam plus artis habebat, quam erat oratori satis. Hoc igitur florescente Crassus est mortuus, Cotta pulsus, iudicia intermissa bello, nos in forum venimus.

CICERO, *Brutus*, 88, 301.

2. Translate and explain the following, giving dates for all the historical allusions:—

(*a*) Nam et quaestiones perpetuae hoc adulescente constitutae sunt, quae antea nullae fuerunt; L. enim Piso tribunus plebis legem primus de pecuniis repetundis Consorino et Manilio consulibus tulit;—et judicia populi quibus aderat Carbo, jam magis patronum desiderabant, tabella data; quam legem L. Cassius Lepido et Mancino consulibus tulit.

(*b*) L. etiam Scipio, vir acer et fortis, cui fortuna belli crimini, invidia populi calamitati fuit.

Eoquo in rostris sedente suasit legem Serviliam Crassus.

(*c*) Atque etiam apud socios et Latinos oratores habiti sunt—Q. D. Valerii Sorani, vicini et familiares mei.

(*d*) Plato enim mihi unus instar est centum millium. (Quote the Greek original of the proverb. To whom does Cicero apply it in the letters to Atticus?)

(*e*) Legimus epistolas Corneliae matris Gracchorum: apparet filios non tam in gremio educatos quam in sermone matris.

HONOR CLASS.

1.—Translate:

Quaere: ego hinc apscessero aps te huc interim. Illuc sis uide,
Quem ad modum astitit seuero fronte curans, cogitans.
Pectus digitis pultat: cor credo euocaturust foras.
Ecce auortit: nisam laeuo in femine habet laeuam manum.
Dextera digitis rationem conputat: ferit femur.
Dextera micat uehementer: quod agat aegre suppetit.
Concrepuit digitis: laborat, crebro commutat status.
Eccere autem capite nutat: non placet quod repperit.
Quidquid est, incoctum non expromet, bene coctum dabit.
Ecce autem aedificat: columnam mento suffigit suo.

Appendix, No. 8.

General Class Examination.

Apage, non placet profecto mihi illaec aedificatio:
Nam os columnatum poetae esse inaudiui barbaro,
Quoi bini custodes semper totis horis accubant.
Euge, euscheme hercle astitit et dulice et comoedice.
Numquam hodie quiescet prius quam id quod petit perfecerit.
Habet, opinor. Age siquid agis: uigila, ne somno stude:
Nisi quidem hic agitare mauis uarius uirgis uigilias.
Tibi ego dico; cantherie, me hauseis te adloqui? Palaestrio,
Vigila inquam, expergiscere inquam: lucet hoc inquam.
PLAUT., *Mil. Glor.*, II., 2, 45–63.

(*a*) Write brief notes on *micat vehementer; os columnatum; euscheme, dulice, comoedice; cantherie.* To whom does the poet, probably, allude in the words *poetae barbaro?*

(*b*) Scan from the 45th to the 57th verse, inclusive, pointing out any peculiarities of the Plautian prosody you may observe. Classify and illustrate, so far as you remember them, the various cases in which quantity has been influenced by accent.

(*c*) Explain the following:—

Nisi Siculum epityrum estur insano bene.
Ego vostra faciam latera lorea.
Non enim faciam quin scias.
Forte fortuna per impluvium huc despexi in proximum.
Non possunt mihi minis tuis hisce oculis exfodiri.
Nam certo neque solariumst aput nos neque hortus ullus
Neque fenestra nisi clatrata.

2.—Translate into Latin Prose:

CICERO TO TITIUS.

Although I am of all men the one least fitted to console you, inasmuch as from your misfortunes I am suffering so much pain that I am myself in need of comfort, still as my sorrow is further than your own from the bitterness of extreme grief, I have considered it due to my intimacy, and to my own feeling of affection for you, not to remain silent any longer under your distress, but to apply some slight consolation which may alleviate your sorrow, if it be not able to cure it. If your ardent desire for him you have lost affects you, or if in thinking over your condition you are filled with sorrow, I suppose the whole depth of your grief cannot easily be exhausted. Some mitigation, however, you may find in our political relations, for I can unhesitatingly affirm that a state of things is in agitation, is being prepared, is impending over the republic, which, if any one has left behind, he cannot to me at least seem to have been frustrated in his change of estate. For what room is there now, I will not say for decency of life, for integrity, virtue, well-directed energies, good qualities, but, in a word, for liberty and safety. In sober truth, I have not heard in this most sad and unhealthy season, of the death of any youth or child, who did not seem to me to have been taken away by the immortal gods from our present miseries, and from a most disastrous condition of life.

3.—Translate into Latin Elegiacs:

Red o'er the forest peers the setting sun,
  The line of yellow light dies fast away,
That crowned the eastern copse: and chill and dun
  Falls on the moor the brief November day.

Now the tired hunter winds a parting note,
  And echo bids good-night from every shade;
Yet wait a while, and see the calm leaves float
  Each to his rest beneath their parent shade.

How like decaying life they seem to glide!
  And yet no second spring have they in store,
But when they fall forgotten to abide
  Is all their portion, and they ask no more.

MODERN LANGUAGES.—*Examiner, Professor Meissner.*

FIRST YEAR STUDENTS.

ITALIAN.

Translate into Italian:

See what you have brought him to. It happened one day that the children were making a great noise. I am surprised to see you still here. He fears nothing in the world. These things are known to all. Where is your wife? There she is. She has lost her parents. This is my horse. He has hurt his foot. Put your purse in your pocket. These are his sons. Petrarch flourished towards the middle of the fourteenth century. Come again this day week.

Translate into English:

La vita umana non è altro che una confusa serie di diletti e di dolori che si succedono colla mescolanza di certi intervalli d'insensibilità e d'oblio, che *sonno* si chiamano: onde quella vita che consiste in molti piaceri e lungh i egrandi, ed in pochi e leggieri dispiaceri, chiamasi felice; ed al contrario misera ed infelice quella che risulta da gravi e lunghi dolori e raramente interrotti da qualche piccolo diletto o riposo: poichè non è per avventura possibile una sincera e lunga continovazione di soli diletti; perchè essendo noi sempre mossi ad operare da qualche incomodo o dolore quasi da etimolo, la nostra vita senza di questi sarebbe priva d'azione, ed in breve tempo si ridurrebbe in assoluta quiete, cioè nella morte.—ANTONIO COCCHI.

Translate:

Offesa verginella,
  Piangendo il suo destino,
  Tutta dolente e bella,
  Fu cangiata da Giove in augellino,
  Che canta dolcemente, e spiega il volo:
  E questo è l'usignolo.
In verde colle udì con suo dilletto
  Cantar un giorno Amor quell'augelletto;
  E del canto invaghito,
  Con miracol gentil prese di Giove
  Ad emular le prove.
  Onde, poi ch' ebbe udito
  Quel musico usignuol, che si soave
  Canta, gorgheggia e trilla,
  Cangiollo in verginella: e questa è Lilla.

FRANCESCO LEMENE.

Appendix, No. 8.

General Class Examination.

FRENCH.

Translate into French :

1. Shall I have the pleasure of seeing you on Monday? No, sir, I shall be in the country. Are you hungry? No, sir, I have breakfasted at eight o'clock. Who has found the gold pin? This man. Why have these soldiers been punished? Because they deserved it. Do you think that she will write to her father after having written to yours? I do not think so.—HAVET.

2. His mother is an old acquaintance of ours. I tremble lest he should come. Do you think he will come? He must have given himself a great deal of trouble. David is often represented playing on the harp. Here is the answer which I have received. He writes better than he speaks.—DE FIVAS.

3. Frederic was succeeded by his son, Frederic William, a prince who must be allowed to have possessed some talents for administration, but whose character was disfigured by odious vices, and whose eccentricities were such as had never before been seen out of a mad-house. He was exact and diligent in the transaction of business; and he was the first who formed the design of obtaining for Prussia a place among the European powers, by means of a strong military organization.—MACAULAY.

Translate into English :

1. Certains animaux paraissent faits pour l'homme. Le chien est né pour le caresser, pour lui donner une image agréable de société, d'amitie, de fidélité et de tendresse, pour garder tout ce qu'on lui confie, pour prendre à la course beaucoup d'autres bêtes avec ardeur, et pour les laisser ensuite à l'homme, sans en rien retenir. Le cheval et les autres animaux semblables se trouvent sous la main de l'homme, pour le soulager dans son travail et pour se charger de mille fardeaux : ils sont nés pour porter, pour marcher, pour soulager l'homme dans sa faiblesse, et pour obéir à tous ses mouvements. Les bœufs ont la force et la patience en partage, pour traîner la charrue et pour labourer. Les vaches donnent des ruisseaux de lait. Les moutons ont dans leur toison un superflu qui n'est pas pour eux, et qui se renouvelle, pour inviter l'homme à les tondre toutes les années. Les chèvres fournissent un crin long, dont l'homme fait des étoffes pour se couvrir. Les peaux des animaux fournissent à l'homme les plus belles fourrures dans les pays les plus éloignés du soleil. Ainsi l'auteur de la nature a vêtu ces bêtes selon leurs besoins, et leurs dépouilles servent encore ensuite d'habits aux hommes pour les réchauffer dans ces climats glacés.—FENELON.

Translate :

NOUVELLE CHANSON SUR UN VIEIL AIR.

S'il est un charmant gazon
  Que le ciel arrose,
Où brille en toute saison
  Quelque fleur éclose,
Où l'on cueille à pleine main
Lis, chèvrefeuille et jasmin,
J'en veux faire le chemin
  Où ton pied se pose !

S'il est un rêve d'amour
  Parfumé de rose,
Où l'on trouve chaque jour
  Quelque douce chose,
Un rêve que Dieu bénit,
Où l'âme à l'âme s'unit,
Oh, j'en veux faire le nid
  Où ton cœur se pose !

VICTOR HUGO.

General Class Examination.

GERMAN.

Translate into German :

I.—She sings very beautifully. My parents desire to be most kindly remembered. The boys come from school. The newspaper lies upon the table. In spite of his illness he is always cheerful. He has been educated partly in France partly in Germany. Every year, when the shooting-season begins, we go for a few months to Scotland. He speaks as he thinks. I have been four times in Germany. We have drunk two kinds of wine. Can you tell me in what house Dr. Henry lives? We rise early. Translate these lines. Ferry me over. We were obliged to wait. What am I to do?

Translate into English :

II.—Der Herbſt unterbrach auf einige Tage die Arbeiten des Knaben. Der Pfarrer hatte beſchloſſen, noch vor dem Winter ſeinen Sohn in das nahe Gebirge mitzunehmen, daß er Berg und Thal ſähe und weiter hineinblicke in die Welt, die ihm ſchon in der dürftigen Dorfebene ſo ſchön geſchienen. Als man es dem Knaben ſagte, fragte er: „Und wir nehmen doch Marlene mit?"

Man verſuchte es ihm auszureden. Aber er wollte nicht ohne ſie reiſen. „Wenn ſie auch nichts ſieht, die Bergluft ſoll geſund ſein, und ſie iſt ſeit lange blaß und matt und fängt Grillen ohne mich." So that man ihm ſeinen Willen. Das Mädchen wurde zu ihm und ſeinen Eltern in den Wagen gehoben und eine kurze Tagereiſe brachte ſie an den Fuß des Berglandes.—Paul Heyse.

Translate :

Zur Schmiede gieng ein junger Held,
Er hatt' ein gutes Schwert beſtellt;
Doch als ers wog in freier Hand,
Das Schwert er viel zu ſchwer erfand.

Der alte Schmied den Bart ſich ſtreicht:
„Das Schwert iſt nicht zu ſchwer noch leicht,
Zu ſchwach iſt euer Arm, ich mein';
Doch morgen ſoll geholfen ſein."

„Nein, heut, bei aller Ritterſchaft,
Durch meine, nicht durch Feuers Kraft."
Der Jüngling ſprichts, ihn Kraft durchdringt:
Das Schwert er hoch in Lüften ſchwingt.

Uhland.

SECOND YEAR STUDENTS.

FRENCH.

Translate into French :

I.—That honesty is the best policy is a maxim which we firmly believe to be generally correct, even with respect to the temporal interest of individuals; but with respect to societies, the rule is subject to still fewer exceptions, and that for this reason, that the life of societies is longer than the life of individuals. It is possible to mention men who have owed great worldly prosperity to breaches of private faith; but we doubt whether it be possible to mention a State which has on the whole been a gainer by a breach of public faith. The entire history of British India is an illustration of the great truth, that it is not prudent to oppose perfidy to perfidy, and that the most efficient weapon with which men can encounter fasehood is truth.—Macaulay.

Appendix, No. 8.

General Class Examination.

Translate into English:

II.—A deux heures, il y avait encore trop de jour pour qu'on fît allumer les lampes, mais il n'y en avait plus assez pour le contentement des yeux. Les souches entassées dans la cheminée de pierre brûlaient péniblement avec une lumière rougeâtre et fumeuse. Valentine se dit avec effroi qu'elle était destinée à vivre dans ce salon, auprès de cette cheminée, au milieu de cette morne famille, aux rayons de ce soleil opaque. Les tentures, les tapis, les tableaux, les meubles, tout ce qu'elle avait trouvé splendide un mois plus tôt, lui parut sinistre. Par quelle fatalité était-elle condamnée à végéter dans cette serre froide, lorsqu'elle se voyait assez belle et assez riche pour briller à Paris? Elle fermait les yeux de temps à autre et voyait en imagination des féeries plus éblouissantes que les splendides aquarelles d'Eugène Lami. Quel réveil, un instant après, lorsqu'elle rencontrait la figure anguleuse, les rouleaux blancs et le regard froid de sa future belle-mère !—EDMOND ABOUT.

III.—Translate:

Elle est un peu pédante, et lorsque nous lisons,
Tout en laissant rôtir sa pantoufle aux tisons,
Elle laisse échapper un fin mot de critique.
Moi, comme j'ai fait choix d'un livre sympathique,
Comme il est quelquefois signé par un ami,
Je le défends, mais trop faiblement, à demi,
Les amoureux ayant des lâchetés infâmes.
—Les poëtes pourtant sont bien compris des femmes,
Non ceux que le lyrisme emporte aux fiers sommets,
Mais les doux, les souffrants, mais Sainte-Beuve, mais
Musset, quand il s'abstient de rire, et Baudelaire,
Lorsque pour engourdir son mal et sa colère
Il se plonge dans les parfums lourds de langueur.
—Elle aime ces divers interprètes du cœur.
Moi, je lis à ses pieds et relis le passage
Où, comme elle l'a dit, l'auteur n'était pas sage,
Doux nids de vers où des baisers étaient tapis.

Et le livre souvent tombe sur le tapis.

FRANÇOIS COPPÉE.

IV.—1. What stereotyped character of the ancient comedy was banished from the stage by Corneille, and by what character did he replace it?

2. Explain how Corneille, Racine, and Voltaire differed in their application of the theory of the three unities.

3. Who were the originals of the following dramatic characters of Molière: Trissotin, Vadius, Martine (Les Femmes Savantes), Alceste, Celimène (Le Misanthrope).

GERMAN.

Translate into German:

1. The soldiers did not murmur, although they had to endure many hardships. I opened the letter without having looked at the address. Every one knows that I am innocent. Answer me by return of post. The king has appointed him ambassador to the Russian court. I have not been permitted to go out for the last fortnight, and shall be obliged to keep the room for some days more. Be sure to come. I do it with pleasure.—AUE.

Appendix, No. 8.

General Class Examination.

2. Charlemagne was scarcely interred when the imbecility and the disputes of his descendants began to bring contempt on themselves and destruction on their subjects. The wide dominion of the Franks was severed into a thousand pieces. Nothing more than a nominal dignity was left to the abject heirs of an illustrious name.—MACAULAY.

Translate into English :

Es iſt ein frommer Wunſch aller Väter, das was ihnen ſelbſt abgegangen, an den Söhnen realſtirt zu ſehen, ſo ungefähr als wenn man zum zweitenmal lebte und die Erfahrungen des erſten Lebenslaufes nun erſt recht nutzen wollte. Im Gefühl ſeiner Kenntniſſe, in Gewißheit einer treuen Ausdauer, und im Mißtrauen gegen die damaligen Lehrer, nahm der Vater ſich vor, ſeine Kinder ſelbſt zu unterrichten, und nur ſoviel als es nöthig ſchien, einzelne Stunden durch eigentliche Lehrmeiſter zu beſetzen. Ein pädagogiſcher Dilettantiſmus fing ſich überhaupt ſchon zu zeigen an. Die Pedanterie und Trübſinnigkeit der an öffentlichen Schulen angeſtellten Lehrer mochte wohl die erſte Veranlaſſung dazu geben Man ſuchte nach etwas beſſerem, und vergaß, wie mangelhaft aller Unterricht ſeyn muß, der nicht durch Leute vom Metier ertheilt wird.—GOETHE.

Translate :

Sey mir gegrüßt, mien Berg mit dem röthlich ſtrahlenden Gipfel,
 Sey mir, Sonne, gegrüßt, die ihn ſo lieblich beſcheint!
Dich auch grüß' ich, belebte Flur, euch, ſäuſelnde Linden,
 Und den fröhlichen Chor, der auf den Aeſten ſich wiegt,
Ruhige Bläue, dich auch, die unermeßlich ſich ausgießt
 Um das braune Gebirg, über den grünenden Wald,
Auch um mich, der, endlich entflohn des Zimmers Gefängniß
 Und dem engen Geſpräch, freudig ſich rettet zu dir.
Deiner Lüfte balſamiſcher Strom durchrinnt mich erquickend,
 Und den durſtigen Blick labt das energiſche Licht.
Kräftig auf blühender Au erglänzen die wechſelnden Farben,
 Aber der reizende Streit löſet in Anmuth ſich auf.
Frei empfängt mich die Wieſe mit weithin verbreitetem Teppich:
 Durch ihr freundliches Grün ſchlingt ſich der ländliche Pfad.

SCHILLER.

THIRD YEAR STUDENTS.

FRENCH.

Translate into French :

I sometimes think with sadness that there must come a time for men of letters, even for the most eminent of them, when, unless they are very sensible and contented men they must have somewhat galling reflections in contemplating the careers of other men as contrasted with their own. They see those whom they remember stupid boys at school with them, or at any rate, second-rate boys ; and these boys are now thriving merchants, deans, bishops, judges, or general officers. They have profited by routine, and their advance is secure. Whereas the man of letters has to make this year the same effort he has made for the last fifteen years. The doctor gives the dose which, after some years of practice, he has made up his mind to be the right thing for the particular disorder he is

Appendix, No. 8.

General Class Examination.

treating; the clergyman has completed his stock of sermons; the merchant or solicitor has set his business well on foot by this time. These men have not, each year, to make a new stride in thought, if they would maintain their position. Yet this is the fate of men of letters.—Helps, *Friends in Council.*

1. Characterize briefly the various schools of French historians of the nineteenth century.

2. What is the leading idea of Augustin Thierry's Histoire de la Conquête de l' Angleterre par les Normands?

3. Mention the chiefs of the classical reaction and their principal works.

4. State briefly the subject of Lamartine's *Jocelyn.*

5. Criticise Alfred Nettement's *Histoire de la Littérature rançaise sous la Restauration et sous le Gouvernement de Juillet*, confining yourself to those portions which you have read yourself.

6. Give an account, in French, of one of the meetings of this class, at which a French essay was read and criticised, provided that you are not to select the meeting at which you yourself read and defended a thesis.

GERMAN.

Translate into German:

The Italian robbers are a desperate class of men that have almost formed themselves into an order of society. They wear a kind of uniform, or rather costume, which openly designates their profession. This is probably done to diminish its skulking, lawless character, and to give it something of a military air in the eyes of the common people; or, perhaps, to catch by outward show and finery the fancies of the young men of the villages, and thus to gain recruits. Their dresses are often very rich and picturesque. They wear jackets and breeches of bright colours, sometimes gaily embroidered; their breasts are covered with medals and relics; their hats are broad brimmed, with conical crowns, decorated with feathers, or variously-coloured ribands; their hair is sometimes gathered in silk nets; they wear a kind of sandal of cloth or leather, bound round the legs with thongs, and extremely flexible, to enable them to scramble with ease and celerity among the mountain precipices.—W. Irving.

Translate into English:

Was Göthe ſelbſt noch in dem letzten Jahrzehnt ſeines Lebens, ſeiner orphiſchen Periode ſchrieb und hinterließ, hat im Grunde nur pſychologiſche Merkwürdigkeit als Werke eines Dichters, der ſein Leben und ſeine Produktionskraft bis zu einem ungewöhnlichen Alter erhielt. Die Geſchichte von Göthe's Greiſenalter iſt ſo vollkommen und ſo natürlich, wie ſein Jugendleben, und darf von dem einſichtigen Phyſiologen, der ſich ſo wenig wie Göthe ſelbſt über die Abnahme und den Rückgang dieſer Altersſtufe täuſcht, als normal betrachtet werden. Es zeigt einen merkwürdigen Uebergang von der Vielheit und Mannichfaltigkeit eines überreichen Lebens zur Einheit in ſich ſelbſt, vom Sinnlichen zum Ueberſinnlichen, von Unruhe zum Frieden. Er hatte ſonſt alle Rollen geſpielt, alle Töne mit ſeinen Dichtungen angeſtimmt, alle Verhältniſſe umfaßt, jetzt iſt er ein ſtets Unwandelbarer geworden und ſich ſelber gleich; der ſonſt ſo heftige und von ſtürmiſchen Leidenſchaften Bewegte iſt nun ganz Ruhe von innen und außen. —Gervinus.

III.—Write, in German, a short account of Siegfried.

Appendix,
No. 8.

General
Class Examination.

MATHEMATICS.—*Examiner, Professor Purser.*

FIRST YEAR STUDENTS.

ALGEBRA.

1. Simplify the expressions

$$\frac{x^2+xy-y^2)^3-(x^2-xy-y^2)^3}{(x-y)\,(x+y)}$$

$$\frac{\frac{a}{b}-\frac{b}{a}}{\sqrt{\frac{a}{b}}-\sqrt{\frac{b}{a}}}.$$

2. Solve the equations

$$\frac{5}{7}\left(x-\frac{1}{3}\right)-\frac{3}{5}\left(x-\frac{1}{7}\right)=\frac{4}{21}$$

$$\sqrt{x+7}+\sqrt{x+2}=\sqrt{4x+17}$$

3. Solve the equations

$$\frac{x}{x+5}=\frac{2}{x-1}$$

$$\begin{cases} x^2+y=x-y \\ x+y=\frac{1}{2} \end{cases}$$

4. Find the sum of the series

$$1+\frac{5}{3}+\frac{7}{3}+\&c.$$

and of $1+3+9+\&c.$

the last term in the first series being 27, and in the second 3^n.

5. Find four numbers in geometrical progression such that the sum of the first and last$=27$ and the sum of the means$=18$.

6. Express $\sqrt{\frac{2}{3}}$ as a continued fraction.

Calculate the first four convergents, and the limit of error of the fourth.

7. Find the condition that $ax^2+bxy+cy^2$ should always preserve the same sign whatever real values be assigned to x and y.

8. Establish the series

$$\log(x+1)=\log(x)+2\left\{\frac{1}{y}+\frac{1}{3}\left(\frac{1}{y}\right)^3+\&c.\right\}\text{ where } y=\frac{1}{2x+1}.$$

Calculate by means of this series the modulus of the common system of logarithms to three places of decimals.

Given that $\log_e(3)=1.0986$.

9. Show that $\log\left(\frac{x}{x-1}\right)$ lies between $\frac{1}{x}$ and $\frac{1}{x-1}$ where x is not less than 2.

10. A crew have to row down a piece of a river and back again in a given time. Show that if the labour expended per hour is proportional to the square of their speed through the water, they will be least fatigued, if they take the same time to go up and to go down.

Appendix, No. 8.

General Class Examination.

CONIC SECTIONS.

1. If P be a point on a conic and Q the point where the tangent at P meets the directrix, PQ subtends a right angle at the focus.

2. The tangent at any point of a hyperbola bisects the angle between the focal radii to the point of contact.

3. The focal chord of curvature of any conic is equal to the focal chord of the conic drawn parallel to the tangent at the point.

4. If a right cone be cut by a plane the curve of section is a conic whose eccentricity $=\frac{\sec\alpha}{\sec\beta}$ where α=semiangle of cone, β=angle which plane makes with the axis.

5. Show that the locus of the vertices of all right cones standing upon a given ellipse is an hyperbola.

6. From a fixed point O a variable line OP is drawn to meet a fixed line, and the angle so formed is bisected, find the envelope of the bisector.

GEOMETRY, &c.

1. If a straight line be divided into two equal and also into two unequal parts, the rectangle under the unequal parts, together with the square of the intermediate part, is equal to the square of half the line.

2. From a given circle cut off a segment containing an angle equal to a given one.

3. Define similar figures and duplicate ratio.

Prove that similar triangles are to one another in the duplicate ratio of their homologous sides.

4. Examine the values of tan 30°, sin 45°, sin 18°.

5. Given $\tan A = \frac{8}{15}$ calculate $\sin A$, and $\tan 2A$.

6. Prove that in any triangle

$$\frac{\tan\frac{1}{2}(A-B)}{\tan\frac{1}{2}(A+B)} = \frac{a-b}{a+b} \text{ and } \tan\tfrac{1}{2}A = \sqrt{\frac{(s-b)(s-c)}{s(s-a)}}$$

7. Given that the circumference of a circle $= 2\pi r$, show its area $= \pi r^2$.

8. Define the length of an arc of a curve as a limit, and adopting this definition, prove that the limit of

$$\frac{\sin\theta}{\theta} = 1 \text{ as } \theta \text{ diminishes.}$$

9. Prove De Moivre's theorem for all indices.

Sum the series

$$1 + \frac{n}{1}\cos\theta + \frac{n.\overline{n-1}}{1.2}\cos 2\theta + \&c., \text{ where } n \text{ is a positive integer.}$$

10. Explain the different steps in the calculation of a table of sines and cosines.

11. Eliminate θ from the equations

$$\frac{x\cos\theta}{a} + \frac{y\sin\theta}{b} = 1 \quad ; \quad \frac{ax}{\cos\theta} - \frac{by}{\sin\theta} = a^2 - b^2$$

12. Any line through the pole is cut harmonically by the circle, pole, and polar.

Appendix, No. 8.

General Class Examination.

13. Prove that the diameter of the circle inscribed in a triangle can never exceed the radius of the circle circumscribed.

14. If two straight lines are at right angles to the same plane they are parallel.

15. In a right angled spherical triangle

$$\sin a = \sin c \sin A \qquad \cos c = \cos a \cos b$$

16. Investigate the formula connecting two sides and two angles of a spherical triangle, when all four are contiguous.

17. In terms of two sides and the vertical angle of a spherical triangle, express the angle between the chords of the sides.

18. An arc c of given length is placed so that its extremities lie upon two fixed arcs of great circles, meeting at an angle C; show that the area of the smaller of the two triangles intercepted is greatest when the triangle is isosceles, c being supposed $\angle C$.

19. Through a fixed point on the circumference of a small circle, two arcs of great circles are drawn, intersecting at right angles, and meeting the small circle again in PQ. Show that the great circle through PQ constantly passes through a fixed point.

SECOND YEAR STUDENTS.

CO-ORDINATE GEOMETRY.

1. Prove the expression for the area of the triangle, whose vertices are the points x_1y_1, x_2y_2 and the origin. Hence by transformation of co-ordinates, find the area of the triangle whose vertices are any three given points.

2. Give diagrams of the positions of the lines

$$x+2y=7 \qquad x+y+3=0$$

Determine their place and angle of intersection.

3. Defining an ellipse as the locus of a point the sum of whose distances from two given points is constant, investigate its equation.

4. Find the locus of a point such that the perpendicular let fall upon one side of an equilateral triangle may be an harmonic mean between the perpendiculars let fall upon the other two.

5. If a conic be given by the general equation, find the equation of the diameter bisecting all chords making an angle θ with the axis of x.

6. Show that for the same conic the equation of the tangent at any point $x'y'$ is

$$axx'+h\,(xy'+yx')+byy'+g\,(x+x')+f\,(y+y')+c=0$$

and that this equation represents the polar of $x'y'$ if the point do not lie on the curve.

7. Investigate the equations of the ellipse and hyperbola in r and p co-ordinates, taking the focus as origin.

8. Prove that if two chords of a conic intersect in P and two others in Q, the rectangles under the segments of the first pair are proportional to the rectangle under the segments of the second pair. Mention some of the more important particular cases of this theorem.

9. Find the locus of the intersection of two tangents to an ellipse, drawn so that the rectangle under the perpendiculars let fall on them from the centre is equal to the rectangle under the semi-axes.

10. From a fixed point O a tangent OT is drawn to one of a system of confocal conics, and a point P taken on the tangent so that $OT\ OP=$ constant; prove that the locus of P is an equilateral hyperbola.

Appendix, No. 8.

General Class Examination.

DIFFERENTIAL AND INTEGRAL CALCULUS.

1. Investigate from first principles the differential co-efficients of $\cos x$, $\frac{1}{x^3}$ and $\sqrt{x}$

2. Explain clearly how the differential calculus is applied to determine the maximum and minimum values of a function.

Apply it to the example, $x^4-4x^3+4x^2$.

3. Show how to determine the equation of the tangent to a curve. Find tangent to $y^3=ax^2$ at the point $x=a$ $y=a$.

4. Find the radius of curvature at the same point.

5. Prove that if $f(x)$ $f'(x)$ $f''(x)$ are finite and continuous from $x=a$ to $x=a+h$

$$f(a+h)=f(a)+f'(a)\frac{h}{1}+f''(a+\theta h)\frac{h^2}{1.2}$$

Expand $\cos^3 x$ as far as the fourth power of x by Maclaurin's theorem.

6. Investigate by the method of envelopes the equation of the evolute of the parabola.

7. Show that if x be positive and less than unity $\log(1+x)$ lies between the limits $x-\frac{x^2}{2}$ and $x-\frac{x^2}{4}$.

8. Apply the integral calculus to determine the volume of a cone and the superficial area of a small circle on the sphere.

9. Find

$$\int_0^a \frac{dx}{a^2+x^2} \qquad \int_0^a \sqrt{a^2-x^2}\,dx$$

Attach geometrical meanings to these integrals.

10. Required

$$\int \frac{dx}{(1+x)^2\sqrt{x}} \qquad \int \frac{dx}{\cos^8 x}$$

11. Required

$$\int \frac{dx}{x^3-x^2-x+1}$$

12. If $u_0+u_1+u_2+$&c., be a series whose terms are continuous functions of x and if this series converge to $f(x)$ for all values of x between a and b, the series

$\int_a^b u_0\,dx+\int_a^b u_1\,dx+$ &c., will be convergent and converge to

$$\int_a^b f(x)\,dx$$

Prove this. Expand $\sin^{-1}x$ in powers of x.

NATURAL PHILOSOPHY.—*Examiner, Professor Everett.*

SECOND YEAR STUDENTS.

EXPERIMENTAL PHYSICS.

1. Describe the action of the common air pump with single barrel.

2. If a hydrometer sinks to the bottom of the stem in a liquid of sp. gr. a, and to the top of the stem in a liquid of sp. gr. b, to what depth will it sink in a liquid of sp. gr. $\frac{1}{2}(a+b)$, the stem being cylindrical, and its dimensions, as well as the volume of the bulb, being given.

Appendix, No. 8.

General Class Examination.

3. What are the laws of capillary elevation and depression in small tubes; and what geometrical property characterizes a film of soapy water attached to a solid boundary, such as a loop of fine wire, not lying in one plane?

4. Describe an experiment illustrating the effect of increase of temperature on the surface tension of oil.

5. State Newton's law of cooling.

6. On what principle is it that a greenhouse with no fire in it produces elevation of temperature?

7. Investigate a formula for determining the apparent expansion of a liquid by the weight thermometer.

8. What is the rigorous formula connecting the real expansions of mercury and glass with the apparent expansion of mercury in glass; and what is the approximate formula commonly employed?

9. What is meant by aberration of light; and how does it afford the means of determining the velocity of light?

10. Describe the mode of proceeding with the gold leaf electroscope to determine whether the charge of a given body is positive or negative.

11. A battery is to be constructed of three precisely similar cells, and its electrodes are to be connected by a wire whose resistance is one tenth of that of one cell. Compare the current obtained by connecting the copper of each cell to the zinc of the next with that obtained by connecting the three coppers together and the three zincs together.

12. If the horizontal and vertical magnetic intensities be known, how can the dip and total intensity be computed?

13. In what direction should a wire forming part of a closed circuit be moved in a magnetic field in order to generate the strongest current?

14. Describe the tangent and sine galvanometers, and prove the principles implied in their names.

15. Define simple harmonic vibrations, and state their principal properties.

16. Indicate the position of the nodes in a pipe stopped at one end, for its fundamental tone and two first overtones.

17. Give a formula for the velocity with which a pulse travels along a stretched string; and deduce a formula for the number of vibrations which a string makes per second.

MATHEMATICAL PHYSICS.

1. Enunciate the parallelogram of forces, and prove that if it be true as regards the direction of the resultant it must be true as regards its magnitude also.

2. Two forces $5\,P$ and $6\,P$ have a resultant $3\,P$. Find the cosine of the angle between the forces.

3. Sketch a system of pulleys of which two are moveable, and determine the mechanical advantage when the weights of the pulleys are not considered. Show also how the weights of the pulleys are to be allowed for.

4. A rectangular inclined plane is 20 feet long, 15 feet wide, and rises 12 feet. Find the force required, acting parallel to a diagonal of the plane, to prevent a cylinder weighing one ton from rolling down the diagonal.

5. A uniform cube is loaded, at the four corners of one face, with weights each equal to that of the unloaded cube. Find the centre of gravity of the loaded cube.

6. A stone is thrown vertically upwards with a velocity of 160 feet

Appendix, No. 8.

General Class Examination.

per second; and after 4 seconds another is thrown after it from the same point with a velocity of 100 feet per second. When and where will they meet?

7. A clock keeps correct time. How many seconds would it gain or lose in a day of 24 hours, if its pendulum were shortened by one thousandth part of its own length; and how much if the force of gravity were increased by one five hundredth part of itself.

8. A conical pendulum of length l makes two revolutions per second. Compute the difference of level between its ends. (The mass is supposed collected at the lower end.)

9. State the laws of ordinary refraction; and show that they cannot be fulfilled when the sine of the angle of incidence from the denser medium exceeds the reciprocal of the index of refraction. What really occurs under these circumstances?

10. Investigate an expression for the focal length of a lens in terms of the radii of curvature of the two surfaces.

11. Light falls upon a plano-convex lens from a point in its axis at the distance of 30 inches. The radius of curvature of the lens is 12 inches, and the index of refraction 1·5. Find the point at which the refracted light will be concentrated.

HONOR CLASS.

MATHEMATICAL PHYSICS.

1. If two forces acting along chords of a circle are inversely proportional to the lengths of the chords, show that their resultant will pass through one or other of the points of intersection of straight lines drawn through the extremities of the chords.

2. A cube is acted on by four forces, P, X, Y, Z. P acts along a diagonal, and X, Y, Z along edges, no two of which are in the same plane and which do not meet the diagonal; find the condition that the forces may have a single resultant.

3. Find the centre of gravity of a hemisphere when the density varies as the square of the distance from the centre.

4. Show that a heavy particle under the action of gravity will rest on a rough paraboloid $\frac{x^2}{\alpha}+\frac{y^2}{\beta}=2z$, if it be placed on the surface at any point above the intersection of the surface with the cylinder $\frac{x^2}{\alpha^2}+\frac{y^2}{\beta^2}=\mu^2$; the axis of the parabola being vertical, its vertex upwards, and μ the coefficient of friction.

5. When a string without weight is stretched over a rough plane curve, show that, commencing from the end where the tension is least, the tension increases in geometrical progression as the inclination of the normal to the normal at the commencement increases in arithmetical progression.

6. Investigate the attraction of a uniform spherical shell upon an external point.

7. Investigate expressions in r, θ, and t for the component accelerations along and perpendicular to the radius vector, when a particle moves in a plane curve.

8. A particle, constrained to move in a straight line, is acted on by a force always directed to a point outside the line, and varying directly as the distance of the particle from that point. Determine the motion.

9. Investigate the direction of projection which gives maximum range

Appendix No. 8.

General Class Examination.

on a given inclined plane, and show that directions equally inclined to this above and below give equal ranges.

10. Find the law of force by which a particle may describe a circle, the centre of force being in the circumference.

11. Show that the resultant of two simple harmonic motions in directions perpendicular to each other, their periods being as 2 to 1, may be parabolic motion.

12. Prove the convertibility of the centres of oscillation and suspension.

THIRD YEAR ENGINEERING STUDENTS.

NATURAL PHILOSOPHY APPLIED.

1. Point out the connexion between the principle of Amsler's planimeter and one of Guldinus' theorems.

2. Prove the parallelogram of couples.

3. Define parallel projections. What relation subsists between the centres of gravity of figures which are parallel projections of each other? Hence show how the centre of gravity of a sector of an ellipse may be found.

4. Distinguish between stress and strain; define shear; and indicate the unit in terms of which the intensity of a shear is expressed.

5. Prove that on a pair of planes of section whose obliquities are together equal to a right angle, the tangential components of a simple stress are of equal intensity, and the intensities of the normal components are together equal to the normal intensity of the stress.

6. Prove that if the stress on a given plane in a body be in a given direction, the stress on any plane parallel to that direction must be in a direction parallel to the first mentioned plane.

7. Prove that if there be oblique stress on three planes at right angles to each other, the tangential components of the stress on any two of those planes in directions parallel to the third plane must be of equal intensity.

8. A pair of principal stresses being given, indicate a geometrical construction for representing the direction and intensity of the stress on any plane at right angles to the plane of the two principal stresses.

9. Prove that if lines radiating from a point be drawn parallel to the lines of resistance of the bars of a polygonal frame, then the sides of any polygon, whose angles lie in those radiating lines will represent a system of forces, which, being applied to the joints of the frame, will balance each other. Also that the lengths of the radiating lines will represent the stresses along the bars.

10. Sketch the outline of a braced frame suitable for roofing, consisting of at least seven bars; and draw a diagram to represent the stresses in the bars.

11. Investigate the angular velocity-ratio of two arms turning in the same plane about fixed centres and connected by a link.

CHEMISTRY.—*Examiner; Dr. Andrews.*

1. How is the specific heat of solid bodies determined?

2. Give an account of the spheroidal state, and explain the experiment in which water is frozen on a red hot plate.

3. How are the air lines distinguished from the metal lines in spectrum analyses?

4. Give a general account of the properties of sulphurous acid.

Appendix, No. 8.

General Class Examination.

5. State in symbols the reaction which occurs in the preparation of chlorine.

6. What are the tests for potash, soda, and ammonia?

7. How would you determine the amount of carbonic acid, and of ammonia, in the atmosphere?

8. How is liquid carbonic acid prepared, and what are its properties?

9. Give an account of the chief ores of iron.

10. What is the formula of hydroxyl. To what class of hypothetical bodies does it belong?

11. Give a general account of the method of conducting an organic analysis.

12. Describe the alcoholic fermentations and the method of determining the carbonic acid evolved.

13. What reaction occurs when sodium acts upon pure alcohol?

14. Give a general account of the properties of the vegetable alcaloids which do not contain oxygen.

15. State and illustrate Ohm's law.

16. Explain volte-electric inductions.

17. Give an account of the leading facts of diamagnetism.

COATES' PRIZE.

1. How would you determine the amount of potash in feldspar?
2. Describe the method of analysing black band iron ore.
3. Give an account of the methods of extracting silver from its ores.
4. Describe and explain the process of cupellation.
5. What are the blow-pipe tests for copper, tin, and manganese?
6. How would you analyse a specimen of native gold?

ENGINEERING.

ADDITIONAL QUESTIONS.

1. Give an account of the precautions to be attended to in constructing the thunder rod.
2. Describe and explain the needle and alphabet telegraphs.
3. Give an account of the process of electrotyping.

CIVIL ENGINEERING.—*Examiner, Professor James Thomson.*

FIRST YEAR STUDENTS.

GEOMETRICAL DRAWING.

1. In Descriptive Geometry; given the projections of a straight line, to find its traces. You should work out this problem in at least two cases with varied data: and you should explain your work clearly.

2. Given the horizontal trace of a plane, and the projections of a point through which the plane passes. Required the vertical trace of the plane. You are to assume the data for yourself, and then to work out the result accurately; and to give explanations of your process.

3. In the accompanying diagram,* in which $x\,y$ is the "ground line," a red straight line $a\,b$, $a'\,b'$, and a blue straight line $c\,d$, $c'\,d'$ are given by their projections. Find accurately the traces of the plane which passes through the red line and is parallel to the blue line: and explain your construction. [The accented letters are to be understood as belonging to the vertical plane of projection.]

---

* The diagram is not printed in the Calendar.

Appendix, No. 8.
General Class Examination.

4. Explain how to find the traces of the plane which passes through three points given by their projections.

5. Given the projections of a straight line, to find the angles which it makes with the planes of projection. You should work out at least one example, and you should give clear explanations.

6. Explain what is meant by linear perspective; showing what are the essential conditions to be accomplished in order that a picture on any surface, plane or curved, may be a true one in linear perspective; and in order that it may be seen as a true outline representation of the original.

7. It has been taught by some writers on perspective that, in order that a correct picture may be truly seen, it is necessary that the eye be specially directed to the "centre of the picture" or to the "centre of view" as some of them have called that point. Say is this correct, and give your reasons. Can it have any applicability to the general case of a picture on any curved surface?

8. Conceive a small model of a house to be made on a scale of $\frac{1}{12}$ of an inch to a foot, the real house having the dimensions figured in the sketch which will be submitted to you. Let the model be so placed as to have its front quoin A B in contact with a vertical picture surface, and its front face inclined at an angle of 30° with the picture surface. Let the distance from the eye to the picture be 2 inches (so small a distance being chosen merely to allow of the work being performed on a small sheet of paper, and without long rulers) and let the point of view be so chosen that the point *a* on the face of the house shall be represented in the centre or pole of the picture. It is required to draw the perspective of the model; and to specify in what situation the real house must be placed in order that the picture of the model may be also a true picture of the real house, situated so that each point of the house would be hidden by the corresponding points of the model and of the picture.

Extra credit will be given if you perform the work by different methods, all agreeing in bringing out the true result.

If you do not find that you can manage to work out the problem according to the data here prescribed; part credit will be given if you select a good example yourself in drawing in perspective, and give clear explanations.

9. Assume a cone (of the kind which is a solid of revolution) with its axis vertical. Assume a plane parallel to the vertical plane of projection, cutting the cone, but not passing through the axis of the cone. Draw accurately and neatly the vertical projection of the line of section of the conical surface: and give a brief written explanation of your construction.

SECOND YEAR STUDENTS.

SURVEYING, LEVELLING, MENSURATION, &C.

1. In a chain survey, explain how the measurement of a chain line may be continued across a river by one or more methods not dependent for due accuracy on a high degree of accuracy in the setting out of one or more perpendiculars. The river is to be understood as being too wide to admit of stretching the chain across it. Explain in contrast one or two commonly used methods which depend essentially on great accuracy in the setting out of perpendiculars.

2. Explain the principle of the Vernier; and show how to find what subdivisions of the parts of the primary scale any instrument with a vernier gives.

3. Given a map of an estate and a set of sections along centre lines of roads, together with additional sections if necessary, so that the whole

Appendix, No. 8.

General Class Examination.

may afford sufficient information as to the levels of the ground at its various parts, how could you proceed to lay down contours on the map, and what would be some of the advantages of having the given information put into the new form of a contour map?

4. In a triangle which may be denoted as ABC, with a split line AD, the following lengths have been noted as measurements made on the ground: AB=2814, AC=2037, BC=2946, AD=1923, BD=1623. Check the measured lengths of the three sides as to whether they be accurate or not.

5. Explain clearly the chief steps in the process of ranging a railway curve by angles at the circumference in cases in which a transversal is used.

6. How may Gravatt's level be tested in the field to ascertain whether it gives level sights or not? You should explain clearly a practical process for doing this.

7. Explain clearly the nature and mode of use of the field level book, which has for headings of its columns, Rise, Back Sight, Fore Sight, Fall, Reduced Levels, Distances, Remarks. Explain also clearly the new field level book which was recommended in the lectures, and used in levelling in the practice course in the present Session; and state the chief reasons on account of which it is recommended in preference to others.

8. State and demonstrate the rule taught in the class under the name, "Simpson's rule," for finding the area of a curve by an odd number of equidistant parallel ordinates drawn across it, the area being limited by the extreme ordinates; and explain how the same rule may be applied in determining the volume of a solid by an odd number of equidistant parallel sections, the volume being limited by the extreme sections.

9. In Bidder's Table of Earthwork what quantities do the two numbers inserted for each pair of end heights respectively express, and how are they used for finding the content of a prismoidal block of given dimensions.

10. For computation of the earthwork along an entire cutting or embankment for a railway, whether will the ordinary prismoidal method or the method of "mean areas" give generally more correct results, and why? In your answer you should tell which of the two will give the greater quantity as the result.

11. Explain clearly how to set out the half-breadths for a railway cutting in sidelong ground.

SECOND YEAR STUDENTS.

OFFICE AND FIELD WORK.

1. Assume for yourself the horizontal projection of a semi-cylindric oblique arch; and then draw the development of the intrado, or soffit, in outline; and give brief explanations of your work.

2. Mention the several methods you know for taking out areas of fields from a map; and describe at least two methods clearly. When you wish to find the area of a triangle shown on a map, what measurements and calculations would you prefer to make? Also, how are the areas of large triangles in a chain survey usually to be calculated?

3. Describe the process which was carried out in the field practice in the early part of the present session, for ranging and measuring a straight line from one given point to another, when both vision and chaining along the line were interrupted by a house; and no theodolite nor other angular instrument was used.

Appendix, No. 8.

General Class Examination.

SECOND AND THIRD YEAR STUDENTS AND COATES' PRIZE.

4. With a view to finding which of two hills, *A* and *B*, is the higher, and what the difference of their heights is, the tops of the hills being 6¾ miles apart, a levelling staff *A* is held on the top of the hill *A* and another staff *B* on the top of the hill *B*, and a levelling instrument is placed on the hill *A*, at a distance of about 20 or 30 feet from the staff *A*; and the instrument being properly adjusted gives a reading on staff *A* of 2·28 ft., and a reading on staff *B* of 6·30 ft. (this latter reading being obtained by aid of the assistant at staff *B*, who shifts up and down on the staff a sliding vane, or other visible object suitable for being bisected by the horizontal fibre of the instrument). Find how much higher these data would show the one hill to be than the other, on the supposition that atmospheric refraction simply diminishes the effect due to curvature of the earth by $\frac{1}{7}$th of itself. You may proceed on the supposition of the earth being a sphere 7916 miles in diameter, and you need not go into long arithmetical work, minute accuracy in the result not being required.

5. Taking for granted that Professor Rankine's method for ranging circular curves for railways by angles at the circumference is sufficiently understood, explain how the process may be modified so as to introduce the curvature gradually in passing from each straight tangent into the main circular bend of the curve.

6. In a **Y** theodolite, is it correct to say that for adjustment of the line of collimation, the diaphragm must be adjusted so as that the intersection of the cross fibres shall be brought into the axis of the cylindric rings? Your answer is to be accompanied with full and clear explanations.

7. Give explanations to such extent as you readily can of the measurement of heights by use of the mercurial barometer, aided by the thermometer.

8. Supposing a vertical cylindric picture surface for a panoramic picture to be specified by its trace on a horizontal plane of projection; and supposing the point of view to be in the axis of the cylinder at a given height above that horizontal plane; and supposing, as usual in descriptive geometry, a vertical plane of projection to be used along with the horizontal one, for specifying the positions of objects, and an infinitely long straight line, inclined in any way, to be specified by the projections of parts of it being given on these two planes: Show how to determine the entire perspective representation of the infinite straight line on the panoramic picture; and how to draw it accurately on the picture as developed and laid down on the plane of delineation.

THIRD YEAR STUDENTS AND COATES' PRIZE.

9. For an oblique bridge on Buck's system, explain how to draw, either in full size or on a large scale, the curve of the development of the half of one edge of the soffit, and how to use this curve, in the stone cutting, for marking on the stone the arris, or edge which is to be common to the soffit and oblique face.

10. Two sides of a triangle have been found by measurement to be 2310 and 1695 links respectively, and the contained angle has been measured as 37° 9½′. Supposing the sides to be quite correct, but that the angle as measured is 1½′ in excess of the truth, what is the error in the calculated length of the third side which will be caused by this error in the measured angle. [You are to work this out without the use of

Appendix, No. 8.
General Class Examination.

tables; but with the use of compasses, straight edge, and a scale of equal parts. A scale of tenths of an inch or of hundredths of a foot will suffice: or you can readily make a sufficient scale for yourself. If you have not a protractor for measuring angles you can easily divide a quadrant so as to find the stated angle with sufficient accuracy. Minute accuracy is not wanted, as an error of one tenth or two tenths of a link, in your answer, will be unimportant, provided that you explain clearly a judicious and easy mode of procedure.]

QUESTIONS FOR THIRD YEAR STUDENTS AND COATES' PRIZE CANDIDATES.

CIVIL AND MECHANICAL ENGINEERING AND ARCHITECTURE.

1. Explain according to the lectures what is meant by the *head* or *pressure* of a particle of water in a pipe or vessel, or in the pores of earth. Also, when water is conveyed in a pipe either above or below ground, what is meant by the virtual height above, or virtual depth below the level of the surface of the ground, of any particle of the water, as distinguished from its actual height or actual depth. Also, if in a line of piping a cock partially closed obstructs the flow of the water, what is meant by the *virtual fall* of the water from any point A before the cock to any point B after it, though the pipe be either level or ascending or descending. In this you should distinguish between actual fall and virtual fall of the water.

2. If a vessel or cistern be divided into two compartments A and B, by a vertical partition of the nature of a thin plate, and if water stands in compartment A up to a certain level, and in compartment B to a level 2 feet lower; and if an orifice is perforated through the partition at a depth 1 foot below the water level in B, and another orifice 2 feet below the same water level; how would you calculate the velocity of the submerged jet of water in each case on the supposition of no important amount of energy being lost in fluid friction of the water at and near the orifice?

3. Is there any important distinction that you can point out between the conditions of the flow of water through orifices in plates and through pipes, bearing on the question as to whether we ought to expect in either or in each case to be able to arrive at very exact formulæ for the quantity of the flow expressed in terms of the dimensions of the orifice or pipe and the impelling pressure.

4. If different liquids (fresh water, salt water, and mercury for instance) having different densities, but all supposed to be of a high degree of fluidity, so that their viscosity or fluid friction may be left out of account, issue from orifices identical in form, and identical in position relative to the free still liquid surface, what will be the relation between the quantities flowing, counted in units of volume per unit of time.

5. What is the formula giving the flow of water in a V gauge notch in units of volume per unit of time, in terms of the height of the still water surface above the vertex of the notch. You need not give the numerical coefficient, but you may use a letter to denote it. Give some simple reasons why the formula might be expected to hold good, and which might form the basis of a theory proving it to hold good.

6. Describe the nature and ordinary uses of a cupola in a foundry; mentioning the various materials or substances which have to be brought into mutual action within it, and how they are severally introduced; also tell how the various products pass away or are withdrawn. How is the iron made to flow from it when wanted; and how stopped?

Appendix, No. 3.

General Class Examination.

7. Describe the nature and uses of specifications for engineering works, and especially of specifications for engineering contracts: and give a sketch of the usual contents of a specification for a contract, and of the schedule of prices and form for tender in connexion with it.

8. Describe briefly the Doric, Ionic, and Corinthian orders of architecture sufficiently to distinguish them from one another, and from other orders or styles of architecture.

9. Explain the meanings of the following terms in Architecture:—Capital, Abacus, Entablature, Architrave, Frieze, Cornice, Triglyph, Scotia, Torus, Corbel, Mullion, Transom.

10. Mention and briefly describe the styles of Medieval Architecture, sometimes called Gothic, and sometimes Norman and Gothic, which prevailed in England from the time of the Norman Conquest till the close of Henry VIII., according to the generally accepted nomenclature of Rickman, taught in the lectures.

11. Explain what is meant by the neutral lamina of a beam subjected to bending by transverse forces, and what by the neutral axis of its cross section; and show how the neutral axis is situated in a cross section of a beam approximately straight when resisting the bending tendency of directly transverse forces.

12. A steel wire 20 feet long, and $\frac{1}{8}$ of an inch in diameter, the cross-section being circular, is hung vertically with a weight at bottom sufficient to render it straight: an additional weight of 260 lbs. is then hung on at bottom and does not strain the wire so far as to the limit of its elasticity. The elongation due to this additional weight is observed to be $\frac{1}{10}$th of an inch. Required the modulus of elasticity for the material.

13. A cast iron beam which is to be of rectangular cross section throughout, and of uniform depth throughout, is to rest horizontally on two points of support, say 5 ft. apart; and is to project beyond each point of support a distance of say 3 ft. Its duty will be to support two equal weights at its two ends. What ought to be the peculiar character of its outline in plan so that its strength may have the same ratio to the bending couple at all parts of its length. It is to be understood to be stiff enough to remain nearly horizontal at all parts; and the supports are to apply to it only vertical forces. What will be the character of its curvature along the various parts of its length?

14. Explain the relation which subsists between shearing stress in a material, and a push acting perpendicularly across a pull of equal intensity in the same material.

15. Explain, so far as you readily can, the relation which subsists between shearing stress or strain, and the torsion of a cylindric bar, or of a cylindric tube.

16. Hodgkinson in his Treatise on Cast Iron gives a set of results, regarding long pillars, of which two are stated in the following words:—

(*a*) In all long pillars of the same dimensions, the resistance to fracture by flexure is about three times greater when the ends of the pillar are flat and firmly bedded, than when they are rounded and capable of turning.

(*b*) A long uniform pillar, with its ends firmly fixed, whether by discs or otherwise, has the same power to resist breaking as a pillar of the same diameter, and half the length, with the ends rounded or turned so that the force would pass through the axis.

Explain more fully what is meant by these two statements; and show reason, through easy theoretical considerations, why the second of these two experimental results might be expected to hold good, approximately at least.

Appendix, No. 8. — General Class Examination.

17. Sketch out and prove as far as you can the conditions taught in the lectures regarding the focus for the face joints of an oblique arch, or the focus for the inner ends, and that for the outer ends, and that which is suitable approximately for the face joints wholly; each considered as being nearly a straight line.

NATURAL PHILOSOPHY.—*Examiner, Professor Everett.*

EXPERIMENTAL PHYSICS.

1. A straight uniform bar ABC, 3 feet long, weighing 2 lbs., is supported at a point B, 1 foot from A, and weights of 7 lbs. and 3 lbs. are hung at A and C respectively. Determine whether the bar will be in equilibrium, and, if not, which way will it turn.

2. If the barrel of an air pump be one tenth as large as the receiver, how much air will be left after 3 strokes?

3. If the specific gravity of lead be 11·4, what will be the apparent weight of 112 lbs. of lead, when completely immersed in water?

4. How can the velocity of sound in any gas be compared with its velocity in air, by experiments with organ pipes.

5. How do you account for the beats which are heard when two notes of nearly the same pitch are sounded together?

6. Describe clearly one method of determining the velocity of light.

7. What is the distinction between a real and a virtual image; and what rule can be given for determining the relative magnitudes of an object and its image as formed by a lens?

8. If the latent heat of fusion of ice be 79°·25, referred to the centigrade scale, what is the specific heat of a substance one pound of which at 50° C. melts a quarter of a pound out of a block of ice at 0° C.?

9. Describe the construction of some one kind of compensated pendulum, illustrating your account by a rough sketch.

10. How would you proceed to magnetize an iron bar by a galvanic current; and what is the difference between the behaviour of soft iron and hard steel as regards magnetization?

11. A pith ball is suspended by a silk thread so as to be within easy distance of the knobs of two Leyden jars, one charged positively and the other negatively. How will the pith ball behave, and what is the explanation?

12. What must be the length of a pendulum that it may make 45 single vibrations in a minute?

NATURAL HISTORY.—*Examiner, Professor Wyville Thomson.*

BOTANY.

1. Contrast in detail the structure of the woody stem of an oak, a palm and a tree-fern.

2. Name and describe the tissues by whose presence or absence you would be able to distinguish microscopic sections of fir-wood, of oak, of a palm stem, and of a tree-fern stem, from one another.

3. Give diagrams of the arrangement of the parts of the flower in the thalamifloræ, the calycifloræ, and the coralliifloræ; indicating the parts and their adhesions and cohesions in technical language.

4. Describe the ovule of any flowering plant, and trace the alteration which it undergoes during its development into a seed.

5. Name and describe the principal forms of syncarpous fruits.

6. Describe the flower of a grass, and contrast it with that of a sedge,

Appendix, No. 8.

Matriculation Examination.

MATRICULATION EXAMINATION—OCTOBER, 1870.

ENGLISH LANGUAGE AND LITERATURE.—*Examiner, Professor Yonge.*

QUESTIONS.

1. From what language is the English language chiefly derived; and about what time did it assume its present form?

2. In what points do an English verb and noun differ from a Latin verb and noun.

3. Name one poet; one dramatic writer; one historian; and one oratar of permanent reputation who flourished before the present century, with the title and subject of one of their most important works; and a mention of some event of importance in the history of the kingdom which occurred in their lifetime.

4. In the following passages correct any faults that occur in either grammar, spelling, or any other points :—Unless I greatly decieve myself the generall affect of this chequered narative will be to exite thankfulness in all religious minds, and hope in the brests of all patricts; for the history of our country during the last hundered and sixty years are eminently the history of phisical, of moral, and of intellectual improvement. In no country has the enmety of race been carried father than in England; in no country have that enmety bean more compleatly efased; the stages of the process by which the ostile elements was melted down into one homogeuous mass is not acurately known to us.—MACAULAY, Hist. c. 1.

And mark also one or two words in the above passage derived from the Greek, and one or two from the Latin.

SUBJECT FOR ESSAY.

THE ADVANTAGES OF THE STUDY OF GENERAL LITERATURE IN EVERY CAREER OR PROFESSION.

MATHEMATICS.—*Examiner, Professor Purser.*

ARITHMETIC.

1. A clock loses $5\frac{1}{2}$ minutes a day. How should it be set at $10\frac{1}{2}$ P.M. so as to strike eight next morning at the right moment?

2. Find the interest on £3,625 for 9 months at 4 per cent.

3. Express 13 feet 9 inches as a fraction of a mile. And $\frac{1}{3}$ of a florin $+ \frac{3}{7}$ of a crown as a fraction of a guinea.

4. Reduce to decimals $\frac{1}{20} + \frac{1}{5} - \frac{3}{16}$

Divide .029202 by 1.57

5. A rectangular field twice as long as broad contains 6,000 square yards, calculate to two decimal places the number of yards in one of its diagonals.

EUCLID.

1. At a given point in a straight line make an angle equal to a given one.

2. Parallelograms on the same base and between the parallels are equal.

Appendix, No. 8.
Matriculation Examination.

3. In an obtuse-angled triangle the square of the side opposite the obtuse angle exceeds the squares of the other two, by twice the rectangle contained by either of these sides and its continuation to meet the perpendicular let fall upon it from the opposite angle.

ALGEBRA.

1. Multiply together $x+1$, $x-2$ and $x-3$. Divide $x^3-\frac{1}{8}$ by $x-\frac{1}{2}$

2. Show that the square of the sum of two numbers is greater than four times their product.

3. If $y=\frac{2-3x}{3-2x}$ express x in terms of y.

4. Solve the equations

$$\frac{x-1}{3}+\frac{x-2}{4}+\frac{x-3}{5}=1$$

$$\frac{7}{2x+1}=\frac{15}{7x-6}$$

$$\sqrt{x+8}-\sqrt{x-8}=2$$

PREL PRIZES IN GEOMETRY.—*Examiner, Professor Purser.*

1. Describe a rectilineal figure, which shall be equal to one given rectilineal figure and similar to another.

2. Find the locus of a point, such that the square of its distance from a given point varies as its distance from a given line.

3. If on the sides of any triangle equilateral triangles be described, the lines joining their centres form an equilateral triangle.

4. On the chord of a quadrant a semicircle is described; determine the area of the space between the two curves.

5. In a segment of a circle inscribe a rectangle of maximum area.

6. Given the base of a triangle and difference of base angles, show that, if there be drawn through the middle point of the base two lines, parallel to the constant directions of the internal and external bisectors of the vertical angle, the bisectors themselves will, with these lines, form a rectangle of constant area.

7. Find a point on a given circle, such that the ratio of the lines joining it to two given points may be one of greatest inequality.

8. If three lines a b c pass through a given point and three lines a' b' c' through another point, show that the lines joining ab' and $a'b$, bc' and $b'c$, ca' and $c'a$ pass through a common point.
(ab' denoting the intersection of a and b')

SCHOLARSHIP EXAMINATIONS.—OCTOBER, 1870.

LITERARY SCHOLARSHIPS.—FIRST YEAR STUDENTS.

GREEK.—*Examiner, Professor MacDouall.*

I. Translate perspicuously these lines from the *Ion* of EURIPIDES:—

ὦ τᾶς ἑπταφθόγγου[2] μέλπων
κιθάρας ἐνοπάν,[2] ἅτ'[1] ἀγραύλοις[2]
κέρασιν ἐν ἀψύχοις ἀχεῖ[1]
μουσᾶν[1] ὕμνους εὐαχήτους!
σοὶ μομφάν, ὦ Λατοῦς παῖ!
πρὸς τάνδ' αὐγὰν αὐδάσω.
ἦλθές μοι χρυσῷ χαίταν
μαρμαίρων, εὖτ'[2] εἰς κόλπους
ἀνθισμὸν[2] χρυσανταυγῆ[2]—
κρόκεα[1] πέταλα[2]—φάρεσιν ἔδρεπον.
λευκοῖς δ' ἐμφὺς[1] καρποῖσιν
χειρῶν εἰς ἄντρου κοίτας
κραυγάν, "ὦ μᾶτέρ!" μ' αὐδῶσαν[1]
θεὸς ὁμευνάτας[2] ἆγες[1] ἀναιδεῖ[1]
Κύπριδι χάριν πράσσων.
τίκτω δ' ἁ[1] δύστανός[2] σοι
κοῦρον, τὸν[1] φρίκᾳ ματρὸς
εἰς εὐνὰν βάλλω τὰν σάν,
ἵνα μ' ἐν λέχεσιν μέλεα[1] μέλεος
ἐζεύξω[1] τὰν δύστανον.
οἴμοι μοι! καὶ νῦν ἔρρει
πτανοῖς[2] ἁρπασθεὶς θοίνα παῖς μοι
τλάμων σὺ δὲ κιθάρᾳ
κλάζεις παιᾶνας μέλπων.
ὠή—τὸν Λατοῦς αὐδῶ,
ὃς τάνδ' ὀμφὰν[2] κληροῖς[1]—
πρὸς χρυσέους θάκους
γᾶς[1] μεσσήρεις[2] ἕδρας
εἰς οὖς[1] αὐδὰν καρύξω.

II. 1. Parse fully and accurately every word to which the figure 1 is attached.

2. Derive or decompound every word to which the figure 2 is attached.

3. Point out various examples of the Doric forms which enter into the lyric portions of tragedy, and annex their Attic equivalents.

Translate the annexed extract from the *Mennippus* of LUCIANUS, annotating any passage which may seem to call for elucidation:—

MEN. παραλαβὼν δέ με ὁ ἀνὴρ ἡμέρας ἐννέα καὶ εἴκοσιν, ἅμα τῇ σελήνῃ ἀρξάμενος, ἔλουε κατάγων ἐπὶ τὸν Εὐφράτην ἕωθεν, πρὸς ἀνατέλλοντα τὸν ἥλιον ῥῆσίν τινα μακρὰν ἐπιλέγων, ἧς οὐ σφόδρα κατήκουον· ὥσπερ γὰρ οἱ φαῦλοι τῶν ἐν τοῖς ἀγῶσι κηρύκων, ἐπίτροχόν τι καὶ ἀσαφὲς ἐφθέγγετο. πλὴν ἀλλ' ἐῴκει γέ τινας ἐπικαλεῖσθαι δαίμονας. μετὰ γοῦν τὴν ἐπῳδὴν τρὶς ἄν μου πρὸς τὸ πρόσωπον ἀποπτύσας ἐπανή-

Appendix, No. 8.

Scholarship Examinations.

γαγε πάλιν οὐδένα τῶν ἀπαντώντων προσβλέποντα. καὶ σιτία μὲν ἡμῖν τὰ ἀκρόδρυα, ποτὸν δὲ γάλα καὶ μελίκρατον καὶ τὸ τοῦ Χοάσπου ὕδωρ, εὐνὴ δὲ ὑπαίθριος ἐπὶ τῆς πόας. ἐπεὶ δὲ ἅλις εἶχε τῆς προδιαιτήσεως, περὶ μέσας νύκτας ἐπὶ τὸν Τίγρητα ποταμὸν ἀγαγὼν ἐκάθηρέ τέ με καὶ ἀπέμαξε καὶ περιήγνισε δᾳδὶ καὶ σκίλλῃ καὶ ἄλλοις πλείοσιν ἅμα καὶ τὴν ἐπῳδὴν ἐκείνην ὑποτονθορύσας. εἶτα ὅλον με καταμαγεύσας καὶ περιελθών, ἵνα μὴ βλαπτοίμην ὑπὸ τῶν φασμάτων, ἐπανάγει ἐς τὴν οἰκίαν, ὡς εἶχον, ἀναποδίζοντα. καὶ τολοιπὸν ἀμφὶ πλοῦν εἴχομεν. αὐτὸς μὲν οὖν μαγικήν τιν᾽ ἔδυ στολὴν τὰ πολλὰ ἐοικυῖαν τῇ Μηδικῇ, ἐμὲ δὲ τουτοισὶ φέρων ἐνεσκεύασε τῷ πίλῳ καὶ τῇ λεοντῇ καὶ προσέτι τῇ λύρᾳ· καὶ παρεκελεύσατο, ἤν τις ἔρηταί με τοὔνομα, Μένιππον μὲν μὴ λέγειν, Ἡρακλέα δὲ ἢ Ὀδυσσέα ἢ Ὀρφέα. ΦΙΛ. ὡς δὴ τί τοῦτο, ὦ Μένιππε; οὐ γὰρ συνίημι τὴν αἰτίαν οὔτε τοῦ σχήματος οὔτε τῶν ὀνομάτων. ΜΕΝ. καὶ μὴν πρόδηλόν γε τοῦτο καὶ οὐ παντελῶς ἀπόρρητον· ἐπεὶ γὰρ οὗτοι πρὸ ἡμῶν ζῶντες ἐς Ἅιδου κατεληλύθεισαν, ἡγεῖτο, εἴ με ἀπεικάσειεν αὐτοῖς, ῥᾳδίως ἂν τὴν τοῦ Αἰακοῦ φρουρὰν διαλαθεῖν καὶ ἀκωλύτως παρελθεῖν ἅτε συνηθέστερον τραγικῶς μάλα παραπεμπόμενον ὑπὸ τοῦ σχήματος. ὁ δὲ μάγος ἐν τοσούτῳ δᾷδα καιομένην ἔχων οὐκέτ᾽ ἠρεμαίᾳ τῇ φωνῇ—παμμέγεθες δέ, ὡς οἷός τε ἦν, ἀνακραγών—Δαίμονάς τε ὁμοῦ πάντας ἐπεβοᾶτο καὶ Ποινὰς καὶ Ἐρινύας καὶ νυχίαν Ἑκάτην καὶ ἐπαινὴν Περσεφόνειαν παραμιγνὺς ἅμα βαρβαρικά τινα καὶ ἄσημα ὀνόματα καὶ πολυσύλλαβα. εὐθὺς οὖν πάντα ἐκεῖνα ἐσαλεύετο, καὶ ὑπὸ τῆς ἐπῳδῆς τοὔδαφος ἀνερρήγνυτο, καὶ ἡ ὑλακὴ τοῦ Κερβέρου πόρρωθεν ἠκούετο, καὶ τὸ πρᾶγμα ὑπερκατηφὲς ἦν καὶ σκυθρωπόν.

ἔδεισεν δ᾽ ὑπένερθεν ἄναξ ἐνέρων Ἀϊδωνεύς.

κατελθόντες δ᾽ ὅμως διὰ τοῦ χάσματος τὸν μὲν Ῥαδάμανθυν εὕρομεν τεθνεῶτα μικροῦ δεῖν ὑπὸ τοῦ δέους· ὁ δὲ Κέρβερος ὑλάκτησε μέν τι καὶ παρεκίνησε, ταχὺ δέ μου κρούσαντος τὴν λύραν παραχρῆμα ἐκοιμήθη ὑπὸ τοῦ μέλους. ἐπεὶ δὲ πρὸς τὴν λίμνην ἤλθομεν, μικροῦ μὲν οὐδ᾽ ἐπεραιώθημεν. ἦν γὰρ πλῆρες ἤδη τὸ πορθμεῖον καὶ οἰμωγῆς ἀνάπλεων.

Translate the following unprepared passage:—

τὸ μὲν ὄνομα ἐντεῦθεν ἔλαβον οἱ 'Κένταυροι,' ὅτι τοὺς ταύρους ἐκέντουν· οὐδὲν γὰρ πρόσεστι ταύρου τοῖς Κενταύροις, ἀλλ᾽ ἵππου καὶ ἀνδρὸς ἰδέα ἐστὶν ἀπὸ τοῦ ἔργου. λαβόντες οὖν οἱ Κένταυροι τὰ Ἰξίονος χρήματα καὶ γαυριῶντες ἐπὶ τῇ πράξει καὶ τῷ πλούτῳ ὑβρισταὶ ὑπῆρχον καὶ ὑπερήφανοι, καὶ πολλὰ κακὰ εἰργάζοντο, καὶ δὴ καὶ κατ᾽ αὐτοῦ Ἰξίονος, ὃς ᾤκει τὴν καλουμένην Λάρισαν πόλιν. οἱ δὲ τότε τοῦτο τὸ χωρίον οἰκοῦντες 'Λαπίθαι' ἐκαλοῦντο. κεκλημένοι δὲ οἱ Κένταυροι παρὰ τῶν Λαπιθῶν ἐπὶ θοίνην μεθυσθέντες ἁρπάζουσι τὰς γυναῖκας αὐτῶν, καὶ ἀναβιβάσαντες ἐπὶ τοὺς ἵππους αὐτὰς ᾤχοντο εἰς τὴν οἰκείαν φεύγοντες ὅθεν ὥρμωντο. ἐπολέμουν οὖν τοῖς Λαπίθαις, καὶ καταβαίνοντες διὰ νυκτὸς εἰς τὰ πεδία ἐνέδρας ἐποίουν, ἡμέρας δὲ γενομένης ἁρπάζοντες ἀπέτρεχον ἐπὶ τὰ ὄρη. οὕτω δ᾽ ἀπερχομένων αὐτῶν ἵππων οὐραὶ καὶ ἀνθρώπων κεφαλαὶ μόνον ἐφαίνοντο. ἀπὸ δὴ ταύτης τῆς ἰδέας ὁ μῦθος ἐπλάσθη, ὡς ἐκ νεφέλης ἵππος τε καὶ ἀνὴρ ἐγεννήθη ἐν τῷ ὄρει.

LATIN.—*Examiner, Professor Nesbitt.*

Translate:

1. Premebat reum praeter vulgatam invidiam crimen unum, quod M. Volsicius Fictor, qui ante aliquot annos tribunus plebis fuerat, testis exstiterat se haud multo post quam pestilentia in urbe fuerat, in iuventutem grassantem in Subura incidisse, ibi rixam natam esse, fratremque suum maiorem natu, necdum ex morbo satis validum, pugno ictum ab Caesone cecidisse, semianimem inter manus domum ablatum, mortuumque inde arbitrari, nec sibi rem exsequi tam atrocem per consules superiorum annorum licuisse. haec Volscio clamitante adeo concitati homines sunt, ut haud multum afuerit, quin impetu populi Caeso interiret. Verginius arripi iubet hominem et in vincula duci. patricii vi contra vim resistunt.

Appendix, No. 6.

Scholarship Examinations.

T. Quinctius clamitat, cui rei capitalis dies dicta sit et de quo futurum prope diem iudicium, eum indemnatum indicta causa non debere violari. tribunus supplicium negat sumpturum se de indemnato; servaturum tamen in vinculis esse ad iudicii diem, ut, qui hominem necaverit, de eo supplicii sumendi copia populo Romano fiat. appellati tribuni medio decreto ius auxilii sui expediunt: in vincla conici vetant; sisti reum pecuniamque, nisi sistatur, populo promitti placere pronuntiant. summam pecuniae quantam aequum esset promitti, veniebat in dubium. id ad senatum reicitur. reus, dum consulerentur patres, retentus in publico est. vades dare placuit. unum vadem ternis milibus aeris obligaverunt. quot darentur, permissum tribunis est. decem finierunt. tot vadibus accusator vadatus est reum. hic primus vades publicos dedit. dimissus e foro nocte proxima in Tuscos in exsilium abiit. iudicii die cum excusaretur solum vertisse exsilii causa, nihilo minus Verginio comitia habente collegae appellati dimisere concilium. pecunia a patre exacta crudeliter, ut divenditis omnibus bonis aliquamdiu trans Tiberim veluti relegatus devio quodam tugurio viveret.—Livy, III. 13.

(*a*) Describe the situation of the region called Subura.

(*b*) To which of the Comitia was the case of Kaeso referred?

(*c*) What was the point of difference between Verginius and his colleagues?

(*d*) Distinguish between *vigiliae, stationes, praesidia; templum, delubrum; plebs, populus; lex, fas, jus; provocatio, appellatio, intercessio; vectigal, tributum; municipium, colonia, praefectura.*

2. An censes, ut de me ipso aliquid more senum glorier, me tantos labores diurnos nocturnosque domi militiæque suscepturum fuisse, si iisdem finibus gloriam meam quibus vitam essem terminaturus? Nonne multo melius fuisset otiosam aetatem et quietam sine ullo aut labore aut contentione traducere? Sed nescio quo modo animus erigens se posteritatem ita semper prospiciebat, quasi quum excessisset e vita tum denique victurus esset. Quod quidem ni ita se haberet ut animi immortales essent, haud optimi cuiusque animus maxime ad immortalitatem gloriae niteretur. Quid quod sapientissimus quisque aequissimo animo moritur, stultissimus iniquissimo? nonne vobis videtur animus is qui plus cernat et longius videre se ad meliora proficisci, ille autem cuius obtusior sit acies non videre? Equidem efferor studio patres vestros quos colui et dilexi videndi, neque vero eos solos convenire aveo quos ipse cognovi, sed illos etiam de quibus audivi et legi et ipse conscripsi. Quo quidem me proficiscentem haud sane quis facile retraxerit neque tamquam Peliam recoxerit. Et si quis deus mihi largiatur ut ex hac aetate repuerascam et in cunis vagiam, valde recusem, nec vero velim quasi decurso spatio a calce ad carceres revocari. Quid enim vita habet commodi? quid non potius laboris? Sed habeat sane, habet certe tamen aut satietatem aut modum. Non lubet enim mihi deplorare vitam, quod multi et ii docti saepe fecerunt, neque me vixisse poenitet, quoniam ita vixi ut non frustra me natum existimem, et ex vita ita discedo tamquam ex hospitio, non tamquam ex domo. Commorandi enim natura deversorium dedit, non habitandi.—Cicero, *Cato Major*, xxiii.

3. Translate into Latin Prose:

The temple of Janus did not long remain closed. The Illyrians who dwelt near the head of the Adriatic upon its eastern side were a nation of pirates, who ravaged the coasts of this sea. The senate having sent ambassadors to the Illyrian queen Teuta to complain of their outrages, she not only refused to listen to their complaints, but caused one of the ambassadors to be murdered. War was straightway declared, and a

Appendix, No. 8.

Scholarship Examinations.

Roman army for the first time crossed the Adriatic. Demetrius of Pharos, an unprincipled Greek, who was the chief councillor of Teuta, deserted his mistress, and surrendered to the Romans the important island of Corcyra. Teuta was obliged to yield to the Romans every thing they demanded, and promised that the Illyrians should not appear south of Lissa with more than two vessels. The suppression of piracy in the Adriatic was hailed with gratitude by the Grecian states, and deserves notice as the first occasion upon which the Romans were brought into immediate contact with Greece. The consul Postumius, who had wintered in Illyria, sent envoys to Athens, Corinth, and other Grecian cities, to explain what had been done. The envoys were received with honour, and thanks were returned to Rome.

Translate:

1. Una omnes ruere, ac totum spumare reductis
Convulsum remis rostrisque tridentibus aequor.
Alta petunt: pelago credas innare revulsas
Cycladas, aut montes concurrere montibus altos:
Tanta mole viri turritis puppibus instant.
Stuppea flamma manu telisque volatile ferrum
Spargitur; arva nova Neptunia caede rubescunt.
Regina in mediis patrio vocat agmina sistro,
Necdum etiam geminos a tergo respicit angues.
Omnigenumque deum monstra et latrator Anubis
Contra Neptunum et Venerem contraque Minervam
Tela tenent. Saevit medio in certamine Mavors
Caelatus ferro, tristesque ex aethere Dirae;
Et scissa gaudens vadit Discordia palla,
Quam cum sanguineo sequitur Bellona flagello.
Actius haec cernens arcum intendebat Apollo
Desuper: omnis eo terrore Aegyptus et Indi,
Omnis Arabs, omnes vertebant terga Sabaei;
Ipsa videbatur ventis regina vocatis
Vela dare, et laxos iam iamque immittere funes.
Illam inter caedes pallentem morte futura
Fecerat ignipotens undis et Iapyge ferri;
Contra autem magno maerentem corpore Nilum,
Pandentemque sinus et tota veste vocantem
Caeruleum in gremium latebrosaque flumina victos.

VIRGIL, VIII., 689—713.

(*a*) Mention an easy emendation of the difficult reading *telis.* v. 94.

(*b*) Supply any historical illustration of the passage which may occur to you.

2. Iam pauca aratro iugera regiae
Moles relinquent, undique latius
Extenta visentur Lucrino
Stagna lacu, platanusque coelebs

Evincet ulmos; tum violaria et
Myrtus et omnis copia narium
Spargent olivetis odorem,
Fertilibus domino priori;

Tum spissa ramis laurea fervidos
Excludet ictus. Non ita Romuli
Praescriptum et intonsi Catonis
Auspiciis veterumque norma.

Privatus illis census erat brevis,
Commune magnum : nulla decempedis
  Metata privatis opacam
    Porticus excipiebat arcton,

Nec fortuitum spernere cespitem
Leges sinebant, oppida publico
  Sumtu iubentes et deorum
    Templa novo decorare saxo.

HORACE, *Odes*, II., 15.

(*a*) Explain accurately the words *Lucrino, intonsi, auspiciis commune, privatis, novo.* What is peculiar in the quantity of the penultimate syllable of *fortuitum?* Mention other words which exhibit the same peculiarity.

(*b*) State the laws of Alcaic verse as exemplified in Horace.

3. Quid mihi, Liuor edax, ignauos obiicis annos ;
  Ingeniique uocas carmen inertis opus?
Non me more patrum, dum strenua sustinet aetas,
  Praemia militiae puluerulenta sequi :
Nec me uerbosas leges ediscere : nec me
  Ingrato uocem prostituisse fero.
Mortale est, quod quaeris, opus, mihi fama perennis
  Quaeritur in toto semper ut orbe canar.
Viuet Maeonides, Tenedos dum stabit et Ide :
  Dum rapidas Simois in mare uoluet aquas.
Viuet et Ascraeus, dum mustis uua tumebit :
  Dum cadet incurua falco resecta Ceres.
Battiades semper toto cantabitur orbe ;
  Quamuis ingenio non ualet, arte ualet.
Nulla Sophocleo ueniet iactura cothurno.
  Cum Sole et Luna semper Aratus erit.
Dum fallax seruus, durus pater, improba lena
  Viuent, dum meretrix blanda, Menandros erit.

OVID, AMORES, I. 15.

4. Turn into Latin verse :

She once, perhaps, in village plenty blest,
Has wept at tales of innocence distrest ;
Her modest looks the cottage might adorn,
Sweet as the primrose peeps beneath the thorn.
Now lost to all ; her friends, her virtue fled,
Near her betrayer's door she lays her head,
And, pinch'd with cold, and shrivelling from the shower
With heavy heart deplores that luckless hour
When idly first, ambitious of the town,
She left her wheel and robes of country brown.

ROMAN HISTORY.

1. Explain the constitutional reforms of Servius Tullius.

2. What reason is there for believing that the territory of Rome was seriously diminished in the war with Porsena?

3. State the chief arguments which have been urged against the authenticity of the early history of Rome.

4. "Si qui quem liberali causa asserat, secundum libertatem vindicias dato."

Translate and explain this law. What ought to have been its operation in the dispute concerning Virginia?

Appendix, No. 8.

Scholarship Examinations.

5. "Patribus cum plebe connubia ne sunto."

When and at whose instigation was this law repealed? What constitutional changes were introduced about the same time?

6. Describe briefly the object of an Agrarian Law. When and by whom was the first Agrarian Law proposed, and with what result? What distinguished service had its author rendered to his country?

History and the English Language.—*Examiner, Professor Yonge.*

1. Sketch the career of Robert, son of William the Conqueror.

2. What great constitutional change took place in France under Louis Le Gros.

3. When was the Salic Law established in France? And when was the contrary principle established in England?

4. In the period 1066—1509, what great naval victories over the French were gained by the English.

5. Who were Hubert de Burgh, Warenne, Earl of Surrey, James von Artaveld, Eustace de Ribeaumont, Etienne Marcel, the Lady of Beaugeu, Archbishop Stratford, Earl Warwick. (It will be sufficient to describe 4 of these, 2 Englishmen, and 2 foreigners.

6. What laws were passed to curb the power of the Church and of the Pope, in the reign of Henry II. and of Edward III.

7. What were the principal enactments of Magna Charta? And how was the validity of the Great Charter admitted by the two next successors of John?

8. Describe the origin, composition, and powers of the States-General.

Write a short essay on the character of Louis XI., and on the results of his reign.

---

1. What is Dr. Latham's statement as to the elements out of which the language of England has been formed?

2. What is Dr. Latham's definition of composition (in words.) Give specimens of each kind of composition.

3. Dr. Latham says "the English language came from Germany;" under what circumstances did it do so: to what extent is the assertion true; and does it require any qualification?

4. Compare the style of Hume and Macaulay as historians; of Addison and Johnson as essayists.

5. How far are we justified in asserting or in denying that English nouns have cases, numbers, and genders?

6. What period deserves to be accounted the golden age of English literature?

Write a short essay on the advantages of a study of *General* Literature to all classes.

SECOND YEAR STUDENTS.

GREEK.—*Examiner, Professor MacDouall.*

I.—Translate these lines from the VIIth Book of the *Ilias*:—

> ὣς ἄρ' ἔφαν, Αἴας δὲ κορύσσετο νώροπι χαλκῷ·
> αὐτάρ, ἐπεὶ δὴ πάντα περὶ χροὶ ἕσσατο τεύχη,
> σεύατ' ἔπειθ', οἷός τε πελώριος ἔρχεται Ἄρης,
> ὅς τ' εἶσιν πόλεμόνδε μετ' ἀνέρας, οὕς τε Κρονίων
> θυμοβόρου ἔριδος μένεϊ ξυνέηκε μάχεσθαι.
> τοῖος ἄρ' Αἴας ὦρτο πελώριος, ἕρκος Ἀχαιῶν,
> μειδιόων βλοσυροῖσι προσώπασι· νέρθε δὲ ποσσὶν
> ἤιε μακρὰ βιβάς, κραδάων δολιχόσκιον ἔγχος.
> τὸν δὲ καὶ Ἀργεῖοι μέγ' ἐγήθεον εἰσορόωντες·
> Τρῶας δὲ τρόμος αἰνὸς ὑπήλυθε γυῖα ἕκαστον·
> Ἕκτορι δ' αὐτῷ θυμὸς ἐνὶ στήθεσσι πάτασσεν,
> ἀλλ' οὔ πως ἔτ' ἄρ' εἶχεν ὑποτρέσαι οὔτ' ἀναδῦναι
> ἂψ λαῶν ἐς ὅμιλον, ἐπεὶ προκαλέσσατο χάρμη.
>
> *   *   *   *
>
> στῆ δὲ μάλ' Ἕκτορος ἐγγύς, ἀπειλήσας δὲ προσηύδα·
> "Ἕκτορ! νῦν μὲν δὴ σάφα εἴσεαι οἰόθεν οἶος,
> οἷοι καὶ Δαναοῖσιν ἀριστῆες μετέασιν
> καὶ μετ' Ἀχιλλῆα ῥηξήνορα θυμολέοντα.
> ἀλλ' ὃ μὲν ἐν νήεσσι κορωνίσι ποντοπόροισιν
> κεῖται μηνίσας Ἀγαμέμνονι ποιμένι λαῶν·
> ἡμεῖς δ' εἰμὲν τοῖοι οἳ ἂν σέθεν ἀντιάσαιμεν
> καὶ πολέες. ἀλλ' ἄρχε μάχης ἠδὲ πτολέμοιο!"
> τὸν δ' αὖτε προσέειπε μέγας κορυθαίολος Ἕκτωρ·
> "Αἶαν διογενὲς Τελαμώνιε, κοίρανε λαῶν!
> μή τί μευ ἠύτε παιδὸς ἀφαυροῦ πειρήτιζε
> ἠὲ γυναικός, ἣ οὐ οἶδεν πολεμήια ἔργα.
> αὐτὰρ ἐγὼν εὖ οἶδα μάχας τ' ἀνδροκτασίας τε·
> οἶδ' ἐπὶ δεξιά, οἶδ' ἐπ' ἀριστερὰ νωμῆσαι βῶν
> ἀζαλέην, τό μοί ἐστι ταλαύρινον πολεμίζειν·
> οἶδα δ' ἐπαΐξαι μόθον ἵππων ὠκειάων,
> οἶδα δ' ἐνὶ σταδίῃ δηΐῳ μέλπεσθαι Ἄρηι.
> ἀλλ' οὐ γάρ σ' ἐθέλω βαλέειν τοιοῦτον ἐόντα
> λάθρῃ ὀπιπεύσας, ἀλλ' ἀμφαδόν, αἴ κε τύχωμι."

II.—1. For Homeric words and forms of words substitute Attic equivalents, noting typical varieties of flexion, whether nominal (and pronominal) or verbal.

2. Give the etymology (in some cases uncertain) of the most noticeable derivatives and compounds.

3. Exemplify from the extract the leading rules of Homeric verse, in regard to the weight of syllables and *hiatus* between vowels (short or long) and diphthongs, and explain any instances of licence whether real or apparent.

I.—Translate the following sentences into Attic prose, marking the accentuation:—

I then mounted an eminence, from which I had a more extensive view of the whole place, and could with less perplexity consider the different conduct of the crowds that filled it. From this station I observed, that the entrance into the garden of Hope was by two gates, one of which

Appendix, No. 8.

Scholarship Examinations.

was kept by Reason and the other by Fancy. Reason was surly and scrupulous, and seldom turned the key without many interrogatories and long hesitation; but Fancy was a kind and gentle portress, who held her gate wide open and welcomed all equally to the district under her superintendency, so that the passage towards it was crowded by all those who either feared the examination of Reason or had been rejected by her.

Translate the following unprepared passage :—

παροιμία μὲν οὖν ἐστὶ λόγος ἐπικαλύπτων τὸ σαφὲς ἀσαφείᾳ, ἢ δι' αἰσθητῶν πραγμάτων σημαίνων πράγματα νοητά ἢ ἐπικεκρυμμένως τὴν ἀλήθειαν ἐπεμφαίνων, ἤτοι βιωφελής—ἐπικρύψει μετρίᾳ πολὺ τὸ χρήσιμον ἔχων ἐν ἑαυτῷ, ἢ προτρεπτικός—παρὰ πᾶσαν τοῦ βίου τὴν ὁδὸν χρησιμεύων. ἡ δὲ παροιμία ἐκ τῆς παρὰ προθέσεως καὶ τοῦ οἶμος ἡ ὁδός· ἤτοι τὸ παρόδιον τρίμμα τε καὶ διήγημα. ἐν γὰρ τῇ ἀρχῇ ἔτι τῶν τρίβων ἀσήμων οὐσῶν, διὰ τὸ τοὺς ὁδεύοντας ἀποκάμνειν τῷ μὴ γινώσκειν πόσον τῆς ὁδοῦ διήνυσαν καὶ τί λείπεται, τὰ νῦν προσαγορευόμενα 'μίλια' πρὸς Ῥωμαίων—τότε 'σημεῖα' καλούμενα—οἱ παλαιοὶ κατά τινας τῆς ὁδοῦ τόπους ἐτίθεσαν· καὶ τούτοις ἐπέγραφόν τινα ζητήματα. τοῦτο δὲ ἐποίουν δυοῖν ἕνεκεν, τοῦ τε γνωρίζειν τὸν ὁδεύοντα τῆς ὁδοῦ τὸ ποσόν, καὶ τοῦ ἀναγινώσκοντα τὸ ἐπίγραμμα καὶ περὶ τὴν τούτου σαφήνειαν καταγιγνόμενον καμάτου ἐπικουφίζεσθαι. περιέχει δὲ παίδευσιν ἠθῶν καὶ παθῶν ἐπανόρθωσιν καὶ τῶν πρακτέων πυκνὰς ὑποθήκας.

LATIN.—*Examiner, Professor Nesbitt.*

Translate :

1. Id sua sponte apparebat, tuta celeribus consiliis praepositurum; et quo id constantius perseveraret, Q. Fabius Maximus sic eum proficiscentem adlocutus fertur.

Si aut collegam, id quod mallem, tui similem, L. Aemili, haberes, aut tu collegae tui esses similis, supervacanea esset oratio mea: nam et duo boni consules etiam me indicente omnia e re publica fide vestra faceretis; et mali nec mea verba auribus vestris nec consilia animis acciperetis. nunc et collegam tuum et te talem virum intuenti mihi tecum omnis oratio est, quem video nequiquam et virum bonum et civem fore, si altera parte claudet res publica, malis consiliis idem ac bonis iuris et potestatis erit. erras enim, L. Paule, si tibi minus certaminis cum C. Terentio quam cum Hannibale futurum censes: nescio an infestior hic adversarius quam ille hostis maneat, et cum illo in acie tantum, cum hoc omnibus locis ac temporibus sis certaturus; et adversus Hannibalem legionesque eius tuis equitibus ac peditibus pugnandum tibi sit, Varro dux tuis militibus te sit oppugnaturus. ominis etiam tibi causa absit C. Flaminii memoria. tamen ille consul demum et in provincia et ad exercitum coepit furere: hic priusquam peteret consulatum, deinde in petendo consulatu, nunc quoque consul, priusquam castra videat aut hostem, insanit. et qui tantas iam nunc procellas proelia atque acies iactando inter togatos ciet, quid inter armatam iuventutem censes facturum, et ubi extemplo res verba sequitur? atqui si hic, quod facturum se denuntiat, extemplo pugnaverit, aut ego rem militarem, belli hoc genus, hostem hunc ignoro; aut nobilior alius Trasumenno locus nostris cladibus erit.

LIVY, XXII. 38, 39.

(*a*) Give Madvig's emendation of *claudet republica.*
(*b*) What is the ordinary construction of *persevero?*
(*c*) Derive and explain the use of *demum.*

Appendix, No. 8. Scholarship Examinations.

2. Accepi aliquot epistolas tuas: ex quibus intellexi quam suspenso animo et sollicito scire averes quid esset novi. Tenemur undique neque iam quo minus serviamus recusamus, sed mortem et eiectionem quasi maiora timemus, quae multo sunt minora. Atque hic status quidem una voce omnium gemitur neque verbo cuiusquam sublevatur. Σκοπὸς est, ut suspicor, illis qui tenent, nullam cuiquam largitionem relinquere. Unus loquitur et palam adversatur adolescens Curio. Huic plausus maximi, consalutatio forensis perhonorifica, signa praeterea benevolentiae permulta a bonis impertiuntur, Fufium clamoribus et conviciis et sibilis consectantur. His ex rebus non spes, sed dolor est maior, quum videas civitatis voluntatem solutam, virtutem adligatam. Ac ne forte quaeras κατὰ λεπτὸν de singulis rebus, universa res eo est deducta, spes ut nulla sit aliquando non modo privatos, verum etiam magistratus liberos fore. Hac tamen in oppressione sermo in circulis dumtaxat et conviciis est liberior quam fuit. Vincere incipit timorem dolor, sed ita, ut omnia sint plenissima desperationis. Habet etiam Campana lex exsecrationem in contione candidatorum, si mentionem fecerint quo aliter ager possideatur atque ut ex legibus Iuliis. Non dubitant iurare caeteri: Laterensis existimatur laute fecisse, quod tribunatum pl. petere destitit, ne iuraret.

CICERO, *ad Atticum* II., 18.

(*a*) Write brief notes on the expressions *gemitur neque sublevatur* and *illis qui tenent.*

(*b*) Mention the date of the above letter and the circumstances under which it was written.

(*c*) What was the Lex Campana? Explain the precaution, above referred to, by which its provisions were secured.

(*d*) Give a brief sketch of the political careers of Curio and Fufius.

3. Translate into Latin prose:

The person as well as the mind of Constantine had been enriched by nature with her choicest endowments. His stature was lofty, his countenance majestic. His deportment graceful; his strength and activity were displayed in every manly exercise; and from his earliest youth to an advanced season of life, he preserved the vigour of his constitution by a strict adherence to the virtues of chastity and temperance. He delighted in the social intercourse of familiar conversation: and though he might sometimes indulge his disposition to raillery with less reserve than was required by the severe dignity of his station, the courtesy and liberality of his manners gained the hearts of all who approached him. The sincerity of his friendship has been suspected: yet he showed, on some occasions, that he was not incapable of a warm and lasting attachment. The disadvantages of an illiterate education had not prevented him from forming a just estimate of the value of learning; and the arts and sciences derived some encouragement from the munificent protection of Constantine.

Translate:

1. PA. Quis me uolt? perii, pater est. SI. Quid ais omnium . .? CH. Ah,
   Rem potius ipsam dic, ac mitte male loqui.
SI. Quasi quicquam in hunc iam grauius dici possiet.
   Ain tandem, ciuis Glyceriumst? PA. Ita praedicant.
SI. "Ita praedicant?" o ingentem confidentiam!
   Num cogitat quid dicat? num facti piget?

Appendix,
No. 8.

Scholarship Examinations.

Vide num eius color pudoris signum usquam indicat.
Adeo inpotenti esse animo, ut praeter ciuium
Morem atque legem et sui uoluntatem patris
Tamen hanc habere studeat cum summo probro!
PA. Me miserum! SI. Hem, modone id demum sensisti, Pamphile?
Olim istuc, olim, quom ita animum induxti tuom,
Quod cuperes aliquo pacto efficiundum tibi;
Eodem die istuc uerbum uere in te accidit.
Sed quid ego? quor me excrucio? quor me macero?
Quor meam senectutem huius sollicito amentia?
An ut pro huius peccatis ego supplicium sufferam?
Immo habeat, ualeat, uiuat cum illa. PA. Mi pater.
SI. Quid "mi pater?" quasi tu huius indigeas patris.
Domus, uxor, liberi inuenti inuito patre.
Adducti qui illam ciuem hinc dicant: uiceris.
PA. Pater, licetne pauca? SI. Quid dices mihi?
CH. Tamen, Simo, audi. SI. Ego audiam? quid audiam,
Chremes? CH. At tandem dicat. SI. Age, dicat sino.
PA. Ego me amare hanc fateor: si id peccarest, fateor id quoque.
Tibi, pater, me dedo. quiduis oneris inpone, impera.
Vis me uxorem ducere? hanc uis mittere? ut potero, feram.
Hoc modo te obsecro, ut ne credas a me adlegatum hunc senem:
Sine me expurgem atque illum huc coram adducam.
SI. Adducas? PA. Sine, pater.
CH. Aequom postulat: da ueniam. PA. Sine te hoc exorem. SI. Sino.
Quiduis cupio, dum ne ab hoc me falli comperiar, Chremes.
CH. Pro peccato magno paullum supplici satis est patri.

TERENCE, *Andria*, V. 3.

Explain and derive the following; marking the quantities where doubtful: *cogito, inpotens, signum, macero, quor, supplicium, adlego, sollicito expurgo.*

2. Exigis a nobis operam sine fine togatam.
Non eo, libertum sed tibi mitto meum.
"Non est" inquis "idem." Multo plus esse probabo:
Vix ego lecticam subsequar, ille feret.
In turbam incideris, cuneos umbone repellet;
Invalidum est nobis ingenuumque latus.
Quidlibet in causa narraveris, ipse tacebo:
At tibi tergeminum mugiet ille sophos.
Lis erit, ingenti faciet convitia voce:
Esse pudor vetuit fortia verba mihi.
"Ergo nihil nobis" inquis "praestabis amicus?"
Quidquid libertus, Candide, non poterit.

MARTIAL, *Ep.* III. 46.

Explain the following allusions:

Phrygiumque Matris Almo qua lavat ferrum.

Quod natura vetat fieri, permitte videri,
Natorum genitor credar ut esse trium.

Cingunt serenum lactei focum vernae
Et larga festos lucet ad lares silva. (compare Horace)

Hirpini veteres qui bene novit avos.

Par scelus admisit Phariis Antonius armis.

Hic colat ingenti redeuntia saecula lustro
Et quae Romuleus sacra Tarentos habet.

Appendix, No. 8.

Scholarship Examinations.

3. Scilicet omne sacrum mors importuna profanat:
   Omnibus obscuras iniicit illa manus.
Quid pater Ismario, quid mater, profuit Orpheo?
   Carmine quid uictas obstupuisse feras?
Aelinon in siluis idem pater, Aelinon, altis
   Dicitur inuita concinuisse lyra.
Adiice Maeoniden, a quo, ceu fonte perenni,
   Vatum Pieriis ora rigantur aquis;
Hunc quoque summa dies nigro submersit Auerno;
   Diffugiunt auidos carmina sola rogos.
Durat opus uatum, Troiani fama laboris,
   Tardaque nocturno tela retexta dolo.
Sic Nemesis longum, sic Delia, nomen habebunt;
   Altera, cura recens, altera, primus amor.
Quid uos sacra iuuant? quid nunc Aegyptia prosunt
   Sistra? quid in uacuo secubuisse toro?
Cum rapiant mala fata bonos, (ignoscite fasso)
   Sollicitor nullos esse putare Deos.
Viue pius? moriere pius. cole sacra; colentem
   Mors grauis a templis in caua busta trahet.
Carminibus confide bonis; iacet ecce Tibullus:
   Vix manet e tanto parua quod urna capit.

Ovid, *Amores*, III. 9, 19.

Translate into Latin verse:—

Though till now ungraced in story,
   Scant although thy waters be,
Alma! roll those waters proudly
   Proudly roll them to the sea!
Yesterday unnamed, unhonoured
   But to wandering Tartar known,
Now thou art a voice for ever
   To the world's four corners blown,
In two nations' annals graven
   Thou art now a deathless name
And a star for ever shining
   In their firmament of fame.

The English Language.—*Examiner, Professor Yonge.*

1. What was the origin of the British Parliament? Was there any similar national council in the reign of the first Norman kings, or before them? What great extension did Parliament receive under Edward I.?

2. In what crusades were any English kings personally concerned? In what points or in what degree did the crusades exercise a permanent influence on Christendom?

3. In what countries are the following places, and for what events are they especially remarkable: Pevensey, Northallerton, Clarendon, Berkeley, Tewkesbury, Neville's Cross, Dunbar, Towton, Bosworth?

4. Hallam affirms that England has produced no patriots to whom she owes more gratitude than Humphrey Bohun and Roger Bigod. Give some account of them.

5. To what extent was the claim set up by Edward I. to be Sovereign Lord of Scotland justified or invalidated by events in the previous history of the two countries?

Appendix, No. 8.

Scholarship Examinations.

6. What territories in France belonged to any kings of England between the years 1066 and 1509? And under what circumstances were they acquired or lost?

Write a short essay on the exploits and character of Edward III.

MODERN LANGUAGES.—*Examiner, Professor Meissner.*

FRENCH.

1.—Translate into French:

When we contemplate the New World, the first circumstance that strikes us is its immense extent. It was not a small portion of the earth, so inconsiderable that it might have escaped the observation or research of former ages, which Columbus discovered. He made known a new hemisphere, larger than either Europe, or Asia or Africa, the three noted divisions of the ancient continent, and not much inferior in dimensions to a third part of the habitable globe. America is remarkable not only for its magnitude, but for its position. It stretches from the northern polar circle to a high southern latitude, above fifteen hundred miles beyond the furthest extremity of the old continent on that side of the line. A country of that extent passes through all the climates capable of becoming the habitation of man, and fit for yielding the various productions peculiar either to the temperate or to the torrid regions of the earth.—ROBERTSON.

II. Translate into English:

Nous vivions resserrés dans nos murs comme au milieu de la mer, et tu ne peux pas croire combien cela vous pèse à la longue, comme on est triste, abattu, de ne pouvoir sortir, même sur les glacis. Des vieillards cloués dans leur fauteuil depuis dix ans, et qui ne songeaient jamais à se remuer, sont accablés de savoir que les portes restent fermées. Et puis, la curiosité d'apprendre ce qui se passe, de voir des étrangers, de causer des affaires du pays, voilà des choses dont le besoin est très-grand, et dont personne ne se doute avant de l'avoir éprouvé comme nous. Le moindre paysan, le plus borné du Dagsberg, qui serait entré par hasard en ville aurait été reçu comme un dieu; tout le monde aurait couru le voir et l'interroger sur les nouvelles de la France.

Ah! ceux qui soutiennent que la liberté passe avant tout ont bien raison, car d'être enfermé dans un cachot, quand il serait aussi grand que la France, c'est insupportable. Les hommes sont faits pour aller, venir, parler, écrire, vivre les uns avec les autres, commercer, se raconter les nouvelles, et lorsque vous leur ôtez cela, le reste n'est plus, qu'un dégoût.—ERCKMANN-CHATRIAN.

III.—1. Give the respective significations and etymologies of the following homonyms: *louer*, *page*, *causer*, *tendre*, *neuf*, *palais*.

2. Give the derivatives both of ancient and modern formation of the following Latin words: acceptare, cantor, captivus, potion-em, rigidus, strictus.

3. Explain the origin of the acute accent and of the initial é in *épaule*, *étoile*.—Compare the formation of these words to *sculpteur*, *stabilité*, *etc.*

4. What consonant represents in French the initial *w* of German and English words? Give examples.

5. What are the phonetic changes of the Latin vowel *i* on its passage into French?

IV. Give a summary, in French, not exceeding two pages, of the last act of Delavigne's Louis XI.

Appendix, No. 8.

Scholarship Examinations.

GERMAN.

I. Translate into German:

1. He said that he knew me. What am I to do? You may read the letter. The palace of the king is guarded by soldiers. When shall we have the shortest day and the longest night? What kind of glasses do you want? He is by no means so industrious as you believe. In spite of his illness he is always cheerful.—AUE'S GRAMMAR.

2. They may say what they like against the Rhine; that it is vulgarized; that it is not so grand as the Danube or the Rhone; but, take it altogether, it is the most charming river in Europe to my mind. I do not wonder at the passionate affection which our friends the Germans have for it. There are five or six great cities which I love very much: Milan, Venice, Genoa, Cadiz, Edinburgh (when it is very warm), and Dublin; but I do not know that I ever have more pleasure than in pottering about these small towns on the Rhine.—ARTHUR HELPS.

II. Translate into English:

Gegen den Abend, als der Wind ſtärker wurde, ſchritt ein Mann durch die Porta Pia und wanderte den Fahrweg zwiſchen den Landhäuſern hin. Der Mantel hing ihm nachläſſig um die ſtarken Schultern und der breite graue Hut ſaſs ihm tief im Nacken. Er ſah nach den Bergen hinüber, bis der Weg tiefer ward und nur ein geringes Stück der Ferne zwiſchen den Gartenmauern durchblichte. Die Enge ſchien ihn zu beklemmen. Er verlor ſich wieder unmuthig in ſeine Gedanken, denen zu entrinnen er das Freie geſucht hatte. Eine ſtattliche Eminenz trippelte mit ihrem Gefolge an ihm vorbei, ohne daſs er ſie gewahrte und grüſſte. Erſt der nachfolgende Cardinalswagen erinnerte ihn an ſeinen Verſtoſs. Von Tivoli her rollten Caroſſen und leichtere Fuhrwerke voll Fremder, die es gelüſtet hatte, die Berge und die Caſcaden im Schnee zu ſehen. Haſtig bog er von der Straſſe ab, links in einen Feldweg hinein, der erſt Mühlen und Schenken vorüber lieſ und dann mitten in die Wildniſs der Campagne hinaus führte.

PAUL HEYSE.

2. Und an die Angſt der Hausfrau denkſt du nicht,
Die ſich indeſſen, deiner wartend, härmt.
Denn mich erfüllt's mit Grauſen, was die Knechte
Von euren Wagefahrten ſich erzählen.
Bei jedem Abſchied zittert mir das Herz,
Daß du mir nimmer werdeſt wiederkehren.
Ich ſehe dich, im wilden Eisgebirg
Verirrt, von einer Klippe zu der andern
Den Fehlſprung thun, ſeh', wie die Gemſe dich
Rückſpringend mit ſich in den Abgrund reißt,
Wie eine Mindlawine dich verſchüttet,
Wie unter dir der trügeriſche Firn
Einbricht und du hinabſinkſt, ein lebendig
Begrabner, in die ſchauerliche Gruft—
Ach, den verwegnen Alpenjäger haſcht
Der Tod in hundert wechſelnden Geſtalten!
Das iſt ein unglückſeliges Gewerb',
Das halsgefährlich führt am Abgrund hin.

SCHILLER'S *Tell.*

Appendix, No. 8.

Scholarship Examinations.

SCIENCE SCHOLARSHIPS.—FIRST YEAR STUDENTS.

MATHEMATICS.—*Examiner, Professor Purser.*

GEOMETRY AND TRIGONOMETRY.

1. In any right angled triangle, any rectilineal figure described on the hypotenuse is equal to the similar and similarly described figures on the sides.

2. Prove that if a circle constantly touch two given circles the tangent drawn to it from a certain given point is of constant length.

3. Find the point on a given line such that the difference of its distances from two given points on opposite sides of the line may be greatest.

4. A line is drawn through one vertex (A) of a parallelogram $A\,B\,C\,D$ cutting the diagonal $B\,D$ in P the side $C\,D$ in Q and the side $B\,C$ produced in R. Show that $P\,Q : P\,R = P\,D^2 : P\,B^2$.

5. If there be drawn three parallel lines a, b, c, and three other parallel lines a', b', c', crossing the first set; prove that the lines joining ab' with $a'b$, bc' with $b'c$, ca' with $c'a$, meet in a point.

N.B.—ab' denotes the intersection of a and b'.

6. Show that if the perpendicular p from the angle A of a triangle divide the opposite side into segments $m\;n$

$$p^2 - mn = bc \cos A$$

7. Prove the expression for the area of a triangle in terms of the sides. Hence show that if the base of a triangle be given and the sum of the other two sides, the area is greatest when the triangle is isosceles.

8. If x, y, z be the sines of the angles of a plain triangle, prove the following relation:

$$4\,x^2y^2z^2 = (x+y+z)\,(z+y-x)\,(x+z-y)\,(x+y-z)$$

9. Find in their simplest forms sin 36° and tan $11°\tfrac{1}{4}$.

10. Given two sides of a triangle and the contained angle, investigate a formula adapted to logarithmic computation for calculating the third side.

11. Prove that the product of the sines of the angles of a triangle can never exceed $\dfrac{3\sqrt{3}}{8}$

12. Show that if δ be the distance between the centre of the circle inscribed in a triangle and the intersection of the perpendiculars let fall from the vertices

$$\delta^2 = 4R^2\left\{8\sin^2\frac{A}{2}\,\sin^2\frac{B}{2}\,\sin^2\frac{C}{2} - \cos A\cos B\cos C\right\}$$

where R is the radius of the circumscribing circle.

---

1. A person invests a portion of his capital in a foreign 7 per cent. loan at 109, and the remainder in English 3 per cent. Consols at 91, so that the dividends may amount in all to £5 per cent. on his capital. Find in what proportions his capital is distributed.

2. Three equal circles of one foot radius are drawn each one touching the other two; calculate to three decimal places the area of the curvilinear triangle bounded by their circumferences.

3. Find sin 15° and tan 15°. Hence deduce in decimals limits between which π must lie.

4. Find the square of the difference and the sum of the cubes of the roots of the equation $x^2 + p\,x + q = 0$ without using radicals in the work.

5. Show that
$(a-b)\ (x-a)\ (x-b)+(b-c)\ (x-b)\ (x-c)+(c-a)\ (x-c)\ (x-a)+$
$(a-b)\ (b-c)\ (c-a)$ vanishes identically without expanding it.

Appendix,
No. 8.

Scholarship
Examinations.

6. If $x+\frac{1}{x}=y$ express $x^5+\frac{1}{x^5}$ in terms of y.

7. Clear of radicals the equation $x^{\frac{1}{3}}+y^{\frac{1}{3}}+z^{\frac{1}{3}}=0$

8. Solve the equations

(α.) $x^{\frac{1}{3}}+\frac{4}{x^{\frac{1}{3}}}=5$ (β.) $\sqrt{x-\frac{1}{x}}+\sqrt{1-\frac{1}{x}}=x$

9. Solve the equation

$$\sqrt{\frac{1}{a^2}-\frac{1}{x^2}}+\sqrt{\frac{1}{b^2}-\frac{1}{x^2}}+\sqrt{\frac{1}{c^2}-\frac{1}{x^2}}=\sqrt{\frac{1}{a^2}+\frac{1}{b^2}+\frac{1}{c^2}-\frac{1}{x^2}}$$

10. Given $\frac{y}{z}+\frac{z}{y}=\frac{a}{x}$, $\frac{z}{x}+\frac{x}{z}=\frac{b}{y}$, $\frac{x}{y}+\frac{y}{x}=\frac{c}{z}$ find x, y, and z.

11. Prove that the coefficient of x^n in $(x^2+ax+b)^n$ is

$$a^n+\frac{n.n-1}{1.2}a^{n-2}b+\frac{n.n-1.\ n-2.\ n-3}{1.\ \ 1.\ \ 2.\ \ 2.}a^{n-4}b^2 \text{ \&c.}$$

12. The fraction $\frac{x+a}{x+b}$ takes three values in geometric progression when for x the numbers 1, 2, 3 are successively substituted. Prove that the common ratio of the progression $=\frac{1+b}{3+b}$.

SECOND YEAR STUDENTS.

MATHEMATICS.—*Examiner, Professor Purser.*

1. Eliminate x from the equations

$$x^4+px^3+1=0 \qquad x^4+rx+1=0.$$

2. If x^m+y^n is a given constant, find when x^py^q is greatest; x, y and all the indices being supposed positive.

3. Calculate the present value of an annuity for n years, if the annual payment increase year by year in a geometric ratio.

4. Show that the following series are convergent

$$1+\frac{n}{1}x+\frac{n.n-1}{1.2}x+\text{ \&c., when } x \angle 1$$

$$\sin\phi+\tfrac{1}{2}\sin 2\phi+\tfrac{1}{3}\sin 3\phi+\text{\&c., always.}$$

5. Sum the series

$$\frac{1}{\sin x}+\frac{1}{\sin 2x}+\frac{1}{\sin 4x}+\text{ \&c., to } n \text{ terms.}$$

6. Expand $\frac{\sin n\theta}{\sin\theta}$ in a series of powers of $\cos\theta$, n being a positive integer.

7. Express in a rational form the relation subsisting amongst the six lines connecting four points.

Appendix, No. 8.

Scholarship Examinations.

CONIC SECTIONS.

[The propositions to be proved geometrically.]

1. The locus of the middle points of all parallel chords of a conic is a right line.

2. If a conic section be inscribed in a quadrilateral, the centre lies on the line joining the middle points of the diagonals.

3. The portion of the tangent to an hyperbola intercepted by the asymptotes is bisected at the point of contact.

4. A rectangular hyperbola circumscribes a right-angled triangle; prove that the perpendicular let fall from the right angle on the base is a tangent to the curve.

5. If a right cone be cut by a plane, the foci of the curve of section are the points of contact, with the plane of the section, of the two spheres which can be inscribed in the cone to touch the plane.

6. A quadrilateral circumscribes a circle. Show that with any of its three pairs of opposite vertices as foci, a conic may be described through any other pair.

SPHERICAL TRIGONOMETRY.

1. Assuming such of Napier's rules for right-angled spherical triangles as do not involve two angles of the triangle, prove the others.

2. Given base and sum of sides of a spherical triangle prove that the product of the tangents of the halves of the base angles is also given.

3. If θ denote the angle which the arc joining the middle points of the sides of a spherical triangle makes with the base (c) produced; prove that $\tan\theta = \frac{\tan\frac{1}{2}E}{\sin\frac{1}{2}c}$ where E = the spherical excess.

4. Two fixed arcs of great circles make an angle C; through a fixed point P is drawn a variable arc cutting off intercepts CX, CY from the fixed arcs, prove the following relation between these intercepts.

$\sin C . \cot\beta = \sin\theta' \cot CX + \sin\theta \cot CY$ where β is the fixed arc CP.

θ, θ' are the fixed angles PCX and PCY.

CO-ORDINATE GEOMETRY.

1. Investigate the formula for transposing from a pair of rectangular axes to another pair containing an angle ω, the axis of x being common to both.

2. Determine the condition that three points given by their polar co-ordinates may lie in one straight line.

3. Find by co-ordinate geometry the locus of a point such that the sum of the squares of the perpendiculars let fall from it on the sides of a regular pentagon may be constant.

4. Determine the equation of the circle passing through the intersections of the circle $x^2+y^2=r^2$ with the right line $x \cos\alpha + y \sin\alpha = p$ and passing through the point $x'y'$.

DIFFERENTIAL CALCULUS.

1. Differentiate $\frac{x}{\sqrt{1-x^2}}$, $\log\left(\frac{e^x}{1+e^x}\right)$

2. If $\tan\frac{y}{2} = \sqrt{\frac{1-x}{1+x}}$ find $\frac{dy}{dx}$

Appendix No. 8.
Scholarship Examinations.

3. Show that when a function of x attains a maximum or minimum value its differential coefficient changes sign from positive to negative or vice versa.

Given two sides of a spherical triangle, find (by the differential calculus) the vertical angle when its area is a maximum.

ENGINEERING SCHOLARSHIPS.—SECOND YEAR STUDENTS.

CHEMISTRY.—*Examiner, Dr. Andrews.*

[For questions 1 to 8, see examination for Medical Scholarships of Second Year.]

9. Describe the method of converting iron into steel, and state the composition of the latter.
10. Give an account of the method of converting any *one* of the following metals from its ores: viz., copper, tin, or mercury.
11. Describe the construction and action of Daniell's battery.
12. Explain the volta-electric induction.

GEOMETRICAL DRAWING.—*Examiner, Professor James Thomson, LL.D.*

[NOTE.—The numbers annexed to the several questions are values assigned to them indicating their relative importance for the examination.]

1. Explain clearly how you could proceed to find the traces of the plane which passes through a given straight line and a given point, in the case in which the traces of the given line and those of a parallel to it through the given point are inaccessible, being all four situated beyond the limits of your sheet of paper. You are not required to work out an example accurately; but your explanation may, with advantage, be aided by a diagram showing some parts of the work, or of the method. (4.)

2. To find the angle between two straight lines given by their projections. If the two given straight lines do not intersect each other the angle required will be the angle between one of the lines and a line passing through a point of that one and parallel to the other. (3.)

3. Explain how to find the vertical projection of the shadow cast on a given vertical surface, plane or curved, by any given line, straight or curved. The given vertical surface is to be understood as being specified by its horizontal trace being given; and the given line as being specified by its two projections being given: and the rays of light are to be supposed all to fall in a given direction; that is, all to be parallel to a given straight line. (4.)

4. Suppose a plane to be given which is inclined to both planes of projection. Assume it for yourself by assuming its traces. Then assume a point in that plane, but not situated in either of the planes of projection. Round that point as centre, and in the assumed plane, suppose a circle of given radius to be drawn. Then draw accurately the horizontal projection of that circle. You may assume about an inch as the radius of the circle, and you may assume the other data so as to afford sufficient space for convenient construction. You are to give clear explanations of your work. (8.)

5. Taking as given a cone specified by the horizontal trace of its surface and the projections of its vertex; and taking as given a straight line which cuts the cone, this line being specified by its projections: find the points in which the straight line cuts the cone. Your solution may

Appendix, No. 8.

Scholarship Examinations.

relate to a right circular cone with vertical axis; or to a cone with circular base on the horizontal plane of projection, and inclined axis; or to a conical surface devoid of any kind of symmetry, and having no special line that can be called its axis. The more general your solution is, it will be valued the more. Part credit will be given if you explain clearly how to carry out the work, even though you do not take time to complete it. (7.)

---

6. Explain how to solve the following three problems in Descriptive Geometry.

(*a*) To draw the traces of the plane which will pass through a given point and will be perpendicular to a given straight line; the point and the straight line being given by their projections.

(*b*) Given the traces of a plane; to find the angle which it makes with the vertical plane of projection.

(*c*) Given the projections of a straight line; to find the angle which it makes with the vertical plane of projection. (6.)

7. Show that if a straight line perpendicular to the vertical plane of projection casts its shadow on any object (for instance on a fluted column) the shadow as shown in vertical projection must be a straight line, or else must consist of parts of one straight line. (3.)

8. State what you know of any opinions or prescriptions often put forward as to any supposed or real grounds for necessity or advisability for limiting the angular extent of the field of view in a picture; or for not allowing it to be very wide, or not wider than some definite extent. In doing this, you may have to state several prevalent fallacies; and to give some trustworthy grounds for practical guidance. (4.)

9. Conceive a small model of a house to be made on a scale $\frac{1}{12}$th of an inch to a foot, the real house having the dimensions figured in the accompanying sketch.* Let the model be placed so that the point *a* on the front face of the model shall be situated in the picture surface and at the centre of the picture, and that the front face of the model shall be inclined at an angle of 60° with the picture surface. Let the distance from the eye to the picture surface be two and a quarter inches, which you can obtain from the scale as being 27 of the given twelfths of an inch. It is required to draw accurately, in your book of answers, the perspective of the model, and to explain clearly your construction. (10.)

10. Make accurately and neatly an isometrical drawing of the outlines of a house which are shown by figured dimensions in the accompanying sketch.* Your drawing is to be the isometrical projection of a supposed model of the house, the model being conceived as made on a scale of $\frac{1}{12}$th of an inch to a foot. Also explain clearly your construction. (6.)

THIRD YEAR STUDENTS.

GEOLOGY AND MINERALOGY.—*Examiner, Professor Wyville Thomson.*

1. Name and describe some of the principal metamorphic rocks. What are the common characters which distinguish this group of rocks from rocks of the plutonic series?

2. Give an accepted classification of the trap rocks according to their mineralogical characters.

3. In what formations, and associated with what beds, is rock-salt

---

* Sketch not printed in Calendar.

Appendix, No. 3.

Scholarship Examinations.

usually found? What is the supposed origin of rock-salt, and what are the arguments in favour of that supposition?

4. Give a classification of the tertiary beds of England and state their distribution and extent.

5. What fossil plants are characteristic of the jurassic series of beds?

6. Name and state the zoological relations of the principal genera of mammalia whose remains have been found in beds older than the miocene tertiaries in Britain.

7. What beds at present in course of formation appear to resemble most closely beds of coal in composition and in microscopic structure; and what is the microscopic structure of those beds?

SURVEYING, LEVELLING, MENSURATION, &c.—*Examiner, Professor James Thomson, LL.D.*

[NOTE.—The numbers annexed to the several questions are values assigned to them indicating their relative importance for the examination.]

1. Supposing that a circular curve of given radius is to be set out for a railway so as to be tangential to two given straight lines already marked on the ground; and supposing the intersection of those two straight lines to be inaccessible; explain how to proceed, by aid of a transversal, to find on the ground the points of contact of the straight tangents with the curve, and to calculate the length of the circular arc between these points. (3.)

2. Describe clearly the chief other uses of the transversal, than those referred to in the foregoing question, for the setting out of circular curves subject to various kinds of obstructions. In this you are not required to give investigations or statements of formulae; but you are to explain the field work dependent on results deducible from established formulae. (3.)

3. Tell what you can as to reasons for easing off the transition from a straight tangent into a circular curve for a railway; and explain any method you know for effecting that object. (4.)

4. Explain how practically to use Bidder's Table; for finding the quantity of earthwork in a block 66 feet long, with 30 feet base, slopes 2 to 1, and end heights 34 and 26 feet: and explain how to use Macneill's Tables for the same calculation, on the understanding that his First Series will be suitable for it. Also tell the distinction between his First Series and Second Series. Take care to state in what units of length or of volume the lengths or volumes will be expressed by the numbers you will refer to. (3.)

5. Calculate the numbers in Bidder's Table for two end heights of 34 and 26 feet, showing clearly the various steps of your calculation: and explain accurately what these numbers mean. (4.)

6. State formulae suitable for computing by use of logarithms, the angles of a triangle, and its area, when the three sides are given. (3.)

7. What is parallax in a theodolite? Also state and clearly explain whether or not a theodolite, fully adjusted for an observation by a person of long sight, will require an adjustment for parallax;—*firstly*, in case of its being used for the same observation by a short-sighted person; and *secondly*, in case of its being used by the short-sighted person for a different observation. State what is the precise condition of all things concerned which is to be brought about by the carrying into effect of the adjustment for parallax. (4.)

---

8. What is the line of collimation in a theodolite or levelling-instrument? How ought it to be situated in a **Y** level, or a **Y** theodolite, and what is the practical test and mode of adjustment for it? (3.)

Appendix, No. 8.

Scholarship Examinations.

9. In a **Y** theodolite, or a **Y** levelling instrument, is it essential or unessential that the two cylindric rings resting in the **Y**s be of exactly equal diameters? Explain clearly the reasons for your answer. (3.)

10. Conceive a small model of a house to be made on a scale of $\frac{1}{12}$th of an inch to a foot, the real house having the dimensions figured in the accompanying sketch.* Let the model be placed so that the point *a* on the front face of the model shall be situated in the picture surface and at the centre of the picture, and that the front face of the model shall be inclined at an angle of 60° with the picture surface. Let the distance from the eye to the picture surface be two and a quarter inches, which you can obtain from the scale as being 27 of the given twelfths of an inch. It is required to draw accurately, in your book of answers, the perspective of the model, and to explain clearly your construction. (10.)

11. Show that in a Gravatt's level there is no exact height in the telescope tube at which the horizontal wire ought necessarily to be adjusted, and explain the bearing of this on Gravatt's rules for the adjustment of his instrument. (6.)

12. Mention some of the best practical methods for taking out areas of fields or lands from a map, and explain clearly at least two of them. In case of the area being first obtained by use of an instrument as so many square inches of paper of the map, how would you reduce it to acres, roods, and perches of the land, the scale of the map being given? (4.)

MEDICAL SCHOLARSHIPS.—SECOND YEAR STUDENTS.

ANATOMY AND PHYSIOLOGY.—*Examiner, Dr. Redfern.*

1. Name the specimens numbered 1 to 10, and describe the characters of the markings on which your opinion is founded.

2. Describe the articulations of the ribs with the vertebræ,—their ligaments, movements, &c.

3. Give a complete account of the action of the following muscles: latissimus dorsi; subscapularis; pronator teres; adductor longus; and peroneus longus.

4. Describe the shape, the surfaces, borders, position, and relations of the liver and spleen.

5. What parts of the human body will yield gelatine, fibrine, and albumen respectively? How would you obtain each of these substances? State the most characteristic properties of each of them.

6. Give an account of the pyloric and ileo-colic valves, and describe the nature of their action, as well as that of the sphincter ani.

7. Explain the relation of the process of dialysis to absorption in the stomach and intestines.

BOTANY.—*Examiner, Professor Wyville Thomson.*

1. Give the principal natural orders of the monochlamydeæ. Give the leading characters, and an outline of the geographical distribution of those monochlamydeous orders which contain important economic or officinal plants.

2. Describe in detail the structure of the ripe seed of the common pea and contrast it with the seed of wheat.

---

* Sketch not printed in Calendar.

Appendix, No. 8.

Scholarship Examinations.

3. Give the characters of the cyperaceæ, and contrast them with those of the juncaceæ.

4. Describe the cones, female and male, of pinus.

5. Describe the structure and the mode of reproduction of any lichen.

6. What are zoospores? Give instances.

7. Describe a mushroom, detailing the structure, functions, and relations of the different parts.

ZOOLOGY.

1. Describe the throat (larynx, pharynx, nostrils, &c.) of the whale.

2. Give the received classification of the cetacea. Name some of the principal genera, giving their leading characters, and an outline of their geographical distribution.

3. Describe some of the principal varieties in the form of the mammalian placenta, and give a classification which has been proposed, founded upon the form of the placenta.

4. What do you understand by complete segmentation of the yelk. In what animal groups are complete and partial segmentation severally found?

5. Describe the organs of respiration in the different groups of annelids.

6. Give a general classification of insects, founded on the completeness or otherwise of their metamorphoses and on the character of their mouths.

7. State what you know with regard to "spontaneous generation."

CHEMISTRY.—*Examiner, Dr. Andrews.*

1. What is meant by the dew point, and how is it determined; *a*, by Daniell's hygrometer; *b*, by the wet bulb thermometer?

2. What is the *critical* point or temperature for carbonic acid, and what phenomena are exhibited by carbonic acid when the temperature or pressure is slightly changed about the critical point?

3. How would you distinguish a salt of rubidium from one of potassium by spectrum analysis?

4. Describe the reaction which occurs in the formation of the bleaching compounds of chlorine with the metals?

5. How would you analyse atmospheric air?

6. Describe the preparation of methene (marsh gas) and ethene (olefiant gas); state also their composition and the action of chlorine upon them.

7. How is phosphuretted hydrogen gas prepared? State the reaction and describe the properties of the gas.

8. What are the tests for lime and magnesia?

9. Explain the reaction when a ferrous salt is converted into a ferric salt; *a*, by the action of nitric acid; *b*, by the action of chlorine.

10. State the composition and give a general account of the compounds of antimony with oxygen and with chlorine.

11. How is methyl-alcohol prepared, and what acid is formed by its oxidation? State the reaction in symbols.

12. Describe the different sources—natural and artificial—of glucose, its chief properties, and relations to the alcohols.

13. How is sulphocyanic acid prepared? State the composition of the sulphocyanide of potassium, and its characteristic reaction.

14. What are the tests for hydrocyanic acid?

15. How is urea prepared from urine—also artificially? State also its composition, and the action of heat upon it.

Appendix, No. 8.

Scholarship Examinations.

THIRD YEAR STUDENTS.

ANATOMY AND PHYSIOLOGY.—*Examiner, Dr. Redfern.*

1. Name the specimens numbered 1 to 12. State to which side of the body each belongs, and describe the characters of the markings on which your opinion is founded.

2. Define with accuracy the movements which take place between the astragalus and each of the various bones with which it articulates; also those which take place between the os calcis and the cuboid bone; and the advantages which we derive from these movements.

3. Describe the anastomoses of arteries and branches of arteries on the face and scalp.

4. State the extent, the length and the width of each of the named portions of the alimentary canal from the mouth to the anus.

5. State the differences in structure and action of the muscles of reptiles and birds; also those of striated and non-striated muscle in man.

6. Describe the processes of secretion of seminal fluid and of gastric juice.

PRACTICAL CHEMISTRY.—*Examiner, Dr. Andrews.*

1. What are the distinctive tests for the arsenious and arsenic acids?

2. How would you analyse (quantitatively) the sulphide of arsenic?

3. Describe the method of analysing bronze (an alloy of copper and tin).

4. A precipitate is formed in the urine, which may be an earthy phosphate or an alkaline urate; how would you distinguish which it is?

5. How would you separate the acid from the juice of a fruit, and obtain it in a pure form?

6. Give an account of the characteristic properties of the uric acid, urate of soda, and cystic-oxide calculi.

7. How would you determine and calculate the amount of sugar in a solution, by the process of fermentation?

8. Give some account of the absorption bands of blood and bile.

[Candidates were also required to perform qualitative analyses.]

FOURTH YEAR STUDENTS.

ANATOMY.—*Examiner, Dr. Redfern.*

1. Name the specimens numbered 1 to 12. State to which side of the body each belongs, and describe the character of the markings on which your opinion is founded.

2. What are the characters, connexions, and uses of the ligaments which lie behind the body of the axis, and of those which are connected with its odontoid process.

3. Name the branches of arteries through which the blood will flow after the application of a ligature to the following arteries; the third stage of the subclavian,—the third stage of the axillary,—the upper third of the femoral,—and the external iliac.

4. Describe accurately the true vocal cords and state what muscles act upon them and how each muscle operates.

5. Give an account of the extent,—the connexions,—and the structure of the choroid coat of the eye.

Appendix No. 8.

Scholarship Examinations.

PHYSIOLOGY.

1. In what respects do living beings and living structures differ from inorganic bodies?

2. State briefly what are the varieties of structure possessed by connective tissues, and how these result from their development.

3. What are the circumstances which influence the excretion of carbonic acid? From what sources is the carbonic acid derived?

4. To what extent, and in what way do nervous actions affect secretions? Give as many instances as you recollect.

5. Describe the process of union, and the character of the substance which unites divided tendons,—divided muscles,—broken bones,—and cut surfaces in cartilage.

SURGERY.—*Examiner, Dr. Gordon.*

Describe the changes that take place in an inflamed part, from their commencement until they terminate in resolution, abscess and ulceration, and mention some of the facts which have led to alterations in its treatment.

Describe briefly the treatment of traumatic haemorrhage, especially that occasionally met with in compound fractures.

Describe briefly the various forms of synovitis of the knee joint, their differential diagnosis and treatment.

Describe the anatomical relations of the astragalus, its dislocations and treatment.

THEORY AND PRACTICE OF MEDICINE.—*Examiner, Professor Cuming.*

1. How is death caused in croup?

2. Give the etiology and physical signs of dilatation of the bronchi.

3. Give an account of the pathology of chlorosis and of anaemia, and mention the points of difference.

4. What are the symptoms of Uraemia? Mention the diseases which they stimulate, and give the differential diagnosis.

5. Enumerate in order of frequency the organs most frequently the seat of tubercle in, (1) children; and, (2) adults.

6. Enumerate the principal remedies for spasmodic asthma, and write prescriptions for the administration of three of them.

MATERIA MEDICA.—*Examiner, Dr. Seaton Reid.*

1. How are medicines which act upon the nervous system classified?

2. How are sedatives subdivided?

3. Under which divisions is Aconitum Napellus and Digitalis Purpurea placed?

4. What is the dose of the Officinal Tincture of Aconite?

5. Write a prescription for its internal administration to an adult, and state in your directions what symptoms ought to cause your patient to cease its use.

6. What dose of the active principle of Aconite had nearly proved fatal?

7. Write a prescription for the internal administration to an adult of the Infusion of Digitalus.

8. What have you to guard against when using Digitalus, and what are the indications that you should stop it?

Appendix, No. 8.

Scholarship Examinations.

9. What are the medicinal properties of the Resin Podophyllum, and write a prescription for its use by an adult.

10. What are the medicinal properties of Hydrate of Chloral? and write a prescription for its use by an adult.

11. Name the medicines on the table, and classify them therapeutically.

MIDWIFERY.—*Examiner, Dr. R. F. Dill.*

1. Describe the Female Pelvis. How does it differ from the Male Pelvis? How does it influence the position of the head in the different stages of natural labour?

2. Describe the several positions in which the head enters the Pelvis according to Naegele.

3. Describe a case requiring *podalic version.* How is the operation performed?

4. State the diagnosis, mechanism and treatment of a shoulder presentation.

5. Describe the effects of chloroform in labour. In what cases would its use be beneficial, and in what cases injurious?

6. Into what stages is natural labour divided. What are the causes of delay in each stage?

7. What are the symptoms and treatment of *puerperal fever?*

8. State the Pathology and treatment of *dysmenorrhoea.*

MEDICAL JURISPRUDENCE.—*Examiner, Professor Hodges,* M.D., L.A.H.

1. Describe the treatment required in poisoning by Tartar Emetic.

2. Give an account of method of employing the guaiacum test for the recognition of blood stains, and state the objections to which it is liable.

3. Mention the chemical antidotes to the following poisons:—Arsenic, Corrosive Sublimate, Copper, Lead.

4. What is the treatment required in poisoning by Belladonna?

5. Describe the post mortem appearances observed after death by starvation?

6. Give an outline of Graham and Hofmann's process for the detection of Strychnine in ale.

LAW SCHOLARSHIPS.—FIRST YEAR STUDENTS.

LAW OF PROPERTY.—*Examiner, Professor Molyneux.*

1. What was or were the operative word or words in a conveyance essential to pass a *remainder* before the 7th and 8th of Vict?

2. In what case does Real Property of an intestate become distributable on his death according to the Common Law?

3. In what case is an estate *pur autre vie* descendible to the heir?

4. What are the different classes of freehold estates as relates to duration?

5. What contingencies incidental to remainders after estates for life do not imperil the succession, and in what instances is it liable to fail as the law now stands?

6. If land be held in fee simple by *A* be limited in a conveyance by him to *B* and the heirs of his body, and *B* dies, leaving his only issue a grandson and granddaughter, the children of a daughter, *A's* only child? what will be the devolution of the estate?

7. What is the nature of the office of "protector of the settlement," and in what cases is his interposition called into operation? And in what case not?

8. In what instance will the wife of a tenant in tail not be entitled to dower at Common Law?

9. In what case can a freehold pass on mere breach of a condition?

10. Under what circumstances do a life estate and a subsequent remainder in fee simple, although vested in the same person, not merge?

11. When, at Common Law, will a preceding chattel estate support a remainder for life? and in what instance will it fail to do so?

12. Estate in fee simple, limited as to one moiety to *B* for life, and as to the other moiety to *C* for life, with remainder to *D* for life, *C* dies, do *B* and *D* thereupon become joint-tenants? and if not, why not?

13. Grant in fee simple by *A* to *B* before the statute "*quia emptores,*" grant of the same lands by *B* to *C* in fee simple since the statute, subsequent grant by *C* in fee simple to *D*, *D* dies without heirs; upon whom does the right to the land devolve? and in what right?

14. By what assurance could the freehold estate of a *feme-covert* be aliened before the 3 and 4 Will. 4 in England, and the 4 and 5 Will. 4 in Ireland?

15. If the owner of a rentcharge had purchased part of the land charged, in what way did the purchase legally affect the owner of the other part, at Common Law? How does the 22nd and 23rd Vict., Chap. 35, affect the rights of the parties?

16. What are *emblements?* And to what cardinal principle of Real Property does the right to them form an exception?

JURISPRUDENCE.—*Examiner, Professor Leslie.*

1. What does Austin mean by the title of his first six lectures—"The Province of Jurisprudence determined?" How does he determine it, positively and negatively?

2. In order that a society may form a society political and independent, two distinguishing marks must unite.

3. What is the ground of the proposition that the power of a sovereign government is incapable of legal limitation?

4. Explain the meaning of the term *unconstitutional,* as applied to a sovereign government.

5. Explain the following passage:—"Nothing is more frequent in jurisprudence than the confusion of motive with intention, and of this confusion the law of England affords a flagrant instance, when it lays down that murder must be committed of malice aforethought."

6. Explain the distinction between rights *in rem,* and rights *in personam,* and give examples.

7. "The most celebrated system of jurisprudence known to the world begins as it ends, with a code." Point out the difference between the causes of the two codifications of Roman law here referred to.

8. Give examples from both Roman and English law of each of the agencies by which law is brought into harmony with the progress of society.

9. Point out the essential distinction between the Roman *Jus Gentium* and the modern *Law of Nations.* How are they connected?

10. Define *agnatic* and *cognatic* relationship.

11. "The movement of the progressive societies has been uniform in one respect." Describe the movement here referred to.

12. Point out the difference between the Roman *heres* and the English *heir.*

Appendix, No. 8.

Scholarship Examinations.

SECOND YEAR STUDENTS.

EQUITY.—*Examiner, Professor Molyneux.*

1. In what cases do courts of Equity decline to exercise the jurisdiction which belongs to it?

2. State the nature and effect of the equitable doctrine of notice, and what are its extent and limits?

3. In what cases are voluntary deeds held void in a court of Equity? and in what instances are they deemed valid?

4. In what cases and to what extent does mistake *in matters of law* affect the validity of deeds when contested in courts of Equity?

5. What are the limits within which courts of Equity relieve against *mistake in fact?*

6. In what cases do courts of Equity give relief under the head of fraud, although the transaction is not tainted with moral turpidity?

7. State the distinction between cases where courts of Equity refuse relief in case of *suppressio veri* in matters of contract, and those in which they would hold *suggestio falsi* of a like fact to invalidate the transaction.

8. Is there any, and (if so) what difference in the exercise of jurisdiction by courts of Equity in relation to voluntary deeds, and those transactions evidenced by instruments not under seal? and what are the grounds upon which such difference is founded?

9. Since the repeal of the statutes against usury, is there any, and (if so) what difference in the relief administered by courts of Equity, according to the party who seeks its aid?

10. What gave rise to the jurisdiction of courts of Equity as forming an acknowledged branch of our judicature?

11. What is the policy of courts of Equity in suits arising out of purchases from expectant heirs?

12. The Registry of Deeds Acts declare *prior unregistered* deeds *void* as against *subsequent registered* deeds. If the grantee of the subsequent deed had notice of the prior deed, on what principle do courts of Equity adjust the rights of the conflicting parties? and what construction do they put upon the statutes as to the intention of the Legislature?

13. The statute against fraudulent conveyances provides that voluntary deeds (however bonâ fide) shall be deemed *void* as against subsequent purchasers for valuable consideration. In the event of the grantee under the subsequent conveyance having had notice of the prior conveyance, how will the court of Equity adjudicate upon the rights of the parties?

14. How is the right of the purchaser under a contract for the sale of land viewed by courts of Law and Equity respectively?

15. How is the contract for the sale of land and goods respectively viewed by courts of Law?

16. What is the legal construction of a grant to a man and his issue?

17. Within what limits is the action *ex delicto* now confined on the death of the person entitled?

JURISPRUDENCE AND CIVIL LAW.—*Examiner, Professor Leslie.*

1. Mr. Maine says of his treatise, "The chief object of the following pages is to indicate some of the earliest ideas of mankind as reflected in ancient law, and to point out the relation of those ideas to modern thought." Give some examples of the relation of ancient to modern legal ideas.

2. Explain the following passage:—"It would seem that the separation of the Law of Persons from that of Things has no meaning in the infancy of Law."

3. "The mention of Primogeniture introduces one of the most difficult problems of historical jurisprudence." What is the difficulty of the problem, and how does Mr. Maine solve it?

4. "The history of Roman Law is the history of the assimilation of Res Mancipi to Res Nec Mancipi." Explain this proposition.

5. Mr. Maine says of the law of mediæval Europe:—"The law relating to women carries the stamp of its double origin." Explain this.

6. Explain the origin of Roman "Equity."

7. Explain the origin of English "Equity."

8. What was the *Querela Inofficiosi Testamenti?*

9. Explain the term *jus postliminii.*

10. "Property is acquired in particular things either by *natural* or *civil* modes." Sandars' Institutes. Explain this passage, and give examples.

11. "There are three great epochs in the history of the Roman system of civil process?"

12. Explain the distinction between *real* and *personal servitudes.*

THIRD YEAR STUDENTS.

COMMON LAW.—*Examiner, Professor Molyneux.*

1. What species of simple contract in writing, is, at common law, equal in operation to instruments under seal; so far as implying consideration?

2. In what cases may a party give oral evidence as to the intention of parties to a written contract?

3. What conditions are essential to entitle a trader to sue a married woman living with her husband? And by what mode can the latter relieve himself from such a liability?

4. What act of the creditor towards the principal debtor will discharge the surety from liability on default of his principal?

5. As between what parties do estoppels operate?

6. Within what limits is a principal liable for the acts of his agent?

7. What are the cases in which a person can sue his co-partner at law, and in what cases can he not do so?

8. What is the legal effect of want of notice to the drawer of dishonour of a bill of exchange?

9. What fixtures is a tenant entitled to remove? And within what time must he exercise such a right?

10. What is the nature of the remedy open to the assignee of a debt for its recovery? And who are the necessary parties to a suit instituted for such purpose?

11. What difference, in matter of evidence, exists in suits for recovery of the price of real estates, contracted to be sold, and that of personal chattels, severally and respectively?

12. What is the nature of a contract of insurance? And what circumstances deprive the insurer of his right of suit?

13. In what case is the tenant not estopped from denying the title of his landlord?

14. In what respect does the statute of frauds affect contracts for the

Appendix, *No.* 8.

Scholarship Examinations.

sale of lands? And in what instance is a purchaser held bound, although the terms of the statute have not been complied with? On what ground is he so held liable?

15. What right of action of a testator does not vest in his executors?

16. In what respect is the obligee of a bond executed by more than one obligor better secured by having the bond *joint and several?*

JURISPRUDENCE AND CIVIL LAW.—*Examiner, Professor Leslie.*

1. "There is no principle in all law which the moderns have been so loath to adopt as that which was known to the Romans as Usucapion." What is the name of this principle in modern jurisprudence, and how is the repugnance to it, referred to by Mr. Maine, to be explained?

2. "The primitive association of Conveyances and Contracts explains something which often strikes the jurist as singularly enigmatical. I mean the extraordinary severity of ancient systems of law to debtors." Explain this.

3. "The system of Grotius is implicated with Roman law at its very foundation." Explain this.

4. Explain the term *heredes necessarii*, and the difference between their liabilities under the early and the later Roman law.

5. "The Servitudes of the Roman Law are of two kinds: 1° Real Servitudes; 2° Personal Servitudes. . . . In a certain sense all servitudes are real; and in a certain sense all servitudes are personal." Explain this.

6. Explain the term *quarta Falcidia.*

7. Describe the general features of the Roman law of succession, as remodelled by the 118th and 127th Novels.

8. Explain the divisions of obligations in the Institutes into obligations *ex contractu, quasi ex-contractu, ex delicto,* and *quasi ex-delicto;* and give examples.

9. "The four modes in which contracts might be entered into under the civil law were, *re, verbis, literis,* and *consensu.*" Explain these terms.

10. Mr. Maine says the chief reason for the study of Roman law lies not in the fact that Roman and English law were once alike, but in the fact that they will be alike. Adduce any reasons you can in confirmation of the view that English law is tending towards a similarity to Roman law.

11. Trace the actual historical relations between English and Roman law.

12. Describe the changes which Roman law underwent with respect to women.

SENIOR SCHOLARSHIPS.

MODERN LANGUAGES.—*Examiner, Professor Meissner.*

FRENCH.

I. Translate into French:

The condition of the king (Charles I.), during this whole winter, was to the last degree disastrous and melancholy. As the dread of ills is commonly more oppressive than their real presence, perhaps in no period of his life was he more justly the object of compassion. His vigour of mind, which, though it sometimes failed him in acting, never deserted him in his sufferings, was what alone supported him; and he was determined, as he wrote to Lord Digby, if he could not live like a king, to die like a gentleman; nor should any of his friends, he said, ever have reason to blush for the prince whom they had so unfortunately served.—HUME.

II. Philological Questions:

1. Show the influence of Patristic Latin on the formation of the French language.
2. Explain the loss of the terminal *i* of the Latin bases of *commencer* and *embrasser*.
3. Whence arose the custom of counting by scores? What remnants are there of it in Modern French?
4. Up to what time were the conjunctive and disjunctive pronouns used promiscuously? Give some examples of disjunctive pronouns being used conjunctively in Modern French.
5. Classify the French substantives derived from past participles according to their form and gender.
6. Show the connexion between adverbs of place and pronouns.

III. Write a brief summary, in French, of Corneille's *Menteur*.

GERMAN.

I. Translate into German:

The government of the Germans, and that of all the northern nations, who established themselves on the ruins of Rome, was always extremely free; and those fierce people, accustomed to independence and inured to arms, were more guided by persuasion than authority, in the submission which they paid to their princes. The military despotism, which had taken place in the Roman empire, and which, previously to the irruption of those conquerors, had sunk the genius of men, and destroyed every noble principle of science and virtue, was unable to resist the vigorous effort of a free people; and Europe, as from a new epoch, rekindled her ancient spirit, and shook off the base servitude to arbitrary will and authority under which she had so long laboured.—HUME.

II. LITERARY QUESTIONS.

1. Who is the original of the Preaching Friar in Schiller's *Wallenstein's Lager*? By whom was this character suggested to the poet?
2. What place does Lessing assign to the supernatural in dramatic composition, and by what examples does he illustrate his theory?
3. Characterize the principal *dramatis personae* in Goethe's Tasso.

III. Write in German, a brief account of the Coronation of the last German Emperor as witnessed by Goethe.

ITALIAN.

I. Translate into Italian:

I am an historical painter by profession, and resided for some time in the family of a foreign prince at his villa, about fifteen miles from Rome, among some of the most interesting scenery of Italy. It is situated on the heights of ancient Tusculum. In its neighbourhood are the ruins of the villas of Cicero, Sylla, Lucullus, Rufinus, and other illustrious Romans, who sought refuge here occasionally from their toils, in the bosom of a soft and luxurious repose. From the midst of delightful bowers, refreshed by the pure mountain breeze, the eye looks over a romantic landscape full of poetical and historical associations. The Albanian mountains; Tivoli, once the favourite residence of Horace and

Appendix, No. 8.

Scholarship Examinations.

Mecænas; the vast, deserted, melancholy Campagna, with the Tiber winding through it, and St. Peter's dome swelling in the midst, the monument, as it were, over the grave of ancient Rome.—WASHINGTON IRVING.

II. Translate into English:

No, mia dolce Matilde; il tristo grido
Della vendetta e del rancor non sorga
Dall' innocente animo tuo, non turbi
Questi istanti:—son sacri. E grande il torto:
Ma perdona, e vedrai che in mezzo ai mali
Un' alta gioia anco riman.—La morte!
Il più crudel nemico altro non puote
Che accelerarla.—Oh! gli uomini non hanno
Inventata la morte: ella saria
Rabbiosa, insopportabile:—dal cielo
Ella ne viene, e l' accompagna il cielo
Con tal conforto, che nè dar nè torre
Gli uomini ponno.—O sposa, o figlia,—udite
Le mie parole estreme: amare, il veggio,
Vi piombano sul cor; ma un giorno avrete
Qualche dolcezza a rammentarle insieme.

MANZONI.

III. Write a brief life, in Italian, of Silvio Pellico.

HISTORY.—*Examiner, Professor Yonge.*

QUESTIONS.

1. About the time of the accession of Henry VII. what great inventions or discoveries had been recently introduced, and what great causes were at work, calculated to produce a general change in the feelings and condition of the various countries of Christendom?

2. Hume speaks in the year 1519 as forming an era in the general system of Europe:—Write a note elucidating this remark.

3. Give a brief sketch of the career and character of three of the following persons:—The Duke of Parma, Sir Walter Raleigh, Cardinal Richelieu, Lord Shaftesbury, Cardinal Fleury, Sir R. Walpole.

4. Between whom did the following battles take place, and with what results:—Stoke, Pinkey, Lepanto, St. Quentin, Langside, Moncontour, Arques, Lutzen, La Marfée, Nordlingen, Naseby, St. Gothard, Seneff, Killiecrankie, Blenheim, Malaga, Pultowa, Molwitz, Fontenoy, Plassey, Minden, Rosbach, Kolin, Kunersdorf, Brandywine, Valmy, Argaum, Trafalgar, Austerlitz, Laswaree, Mehidpore, Salamanca, Dennewitz. (It will be sufficient to select 6 or 8 of this number.)

5. Hallam remarks:—"The reign of James I. is perhaps on the whole the most important in the constitutional history of Ireland:"—Write an explanatory note on this statement.

6. Explain the causes or pretexts, and the chief events of the War of 1741.

7. Review the events which led to the American War, taking into account the state of parties among the Colonists themselves.

8. Narrate the course of the French Revolution, from the meeting of the States-General to the dissolution of the Constituent, and the first sitting of the Legislative Assembly.

9. "On examination it will be found that, in nearly all particulars, a modern Tory resembles a Whig of Queen Anne's reign; and a Tory of Queen Anne's reign a modern Whig."—Lord Stanhope's History of England, c. 1., p. 7. Examine and comment on this statement.

Appendix, No. 8, Scholarship Examinations.

ESSAY ON THE CHARACTER OF THE ENGLISH REVOLUTION OF 1688, CONTRASTED WITH THAT OF THE FRENCH REVOLUTION A CENTURY LATER.

METAPHYSICS.—*Examiner, Professor Park,* M.A.

1. State, and examine very briefly, the leading positions of Phrenology.

2. "All sensible cognition is, in a certain acceptation, reduced to Touch"? Show the importance of the *psychological* aspect of this question, and notice the views of Locke and of Sir W. Hamilton.

3. Examine Dean Mansel's assertion—"It is the locomotive faculty which first informs us immediately of the existence and properties of a material world exterior to our organism."

4. What is "the really important difference of opinion on the subject of perception between Brown and Sir W. Hamilton"?

5. "To be conscious of a particular sensation we must know it as such; and to know it as such implies a concomitant knowledge of other sensations as different, and thus of the bodily organism as extended, or as occupying space." Where does this reasoning occur? Examine it.

6. "Une perception ne sauroit venir naturellement, que d'une autre perception." To whom do we owe this doctrine? Sir W. Hamilton adopts it with an important limitation? What is the opinion of Locke? Of Mr. J. S. Mill?

---

7. Explain and examine,—"Mr. Mill has a rival system to propound, a reassertion of Hume; and the grand weapons by which he proposes to beat down the current philosophy, and to establish his own, are what he calls the law of inseparable association and its attendant law of oblivescence."

8. Illustrate,—"Some phenomena [of mental reproduction] are saved by the law of Repetition alone, while others require a combination of two laws of Repetition and Redintegration."

9. State ( ) the important questions raised by Hume, and the answers these received from Reid and from Kant; (β) The inconsistencies of which Kant is accused by M. Cousin.

10. Sketch briefly Locke's view (α) of Primary Qualities of Body; (β) of Degrees of Assent. You are invited to point out whatever seems to you objectionable either in the doctrine or in the language of Locke upon these subjects.

11. Analyze the phenomenon of moral approbation. Dr. Newman observes, "Conscience . . . is the echo of a voice . . . not like Taste its own evidence." Explain and illustrate.

12. What are the chief problems of Metaphysics? With what explanations may we say that "metaphysics reach truth which is independent of any observation of ours, but it is truth which *we* can discover only by induction?"

13. How do Locke, Berkeley, Kant, Mr. J. S. Mill, and Dr. M'Cosh, severally account for our idea of *substance?*

14. What is M. Comte's classification of the sciences? His famous "*loi des trois états*"?

Appendix, No. 8

Scholarship Examinations.

CHEMISTRY.—*Examiner, Dr. Andrews.*

1. Describe the application of polarized light to the discrimination of solutions of different organic bodies.

2. Give an account of Graham's observations on the diffusion of liquids.

3. What are the allotropic forms of Silicon, and how are they prepared?

4. Give a general account of Thallium, and of its chief compounds.

5. Describe the distinguishing properties of the dextrotartaric acid, the levo-tartaric acid, and the para-tartaric or racemic acid.

6. Describe fully Dumas' method of determining the density of a vapour.

7. How would you analyse an organic compound containing carbon, oxygen, hydrogen, and sulphur?

8. Give an account of the chemical action of the different parts of the solar spectrum.

[Candidates were also required to perform qualitative analyses.]

NATURAL HISTORY.—*Examiner, Professor Wyville Thomson.*

BOTANY.

1. What is meant by Phyllotaxis? Give some examples with formulæ.

2. Describe the phenomena of climbing in plants, and describe the various modifications in mode of growth and in structure and form which subserve the different processes of climbing.

3. Describe in detail some of the most marked instances of the fertilization of plants by means of insects.

4. What are the chief natural orders of the calycifloræ; name and give the characters and the general geographical distribution of those calycifloral orders which are of the greatest value to man.

5. State the systematic position, and describe the general structure and the mode of reproduction of the Lycopodiaceæ.

6. Give the character of the natural order Desmideæ, and describe especially the process of conjugation in this group.

ZOOLOGY.

1. Describe the organs of circulation and of respiration in the different orders of fishes severally.

2. In what group of the invertebrata do we first find an organ representing the kidneys? Describe the different forms under which this organ occurs in the principal groups of the animal kingdom.

3. In what essential respects do sponges differ from the cœlenterata, and in what respects do they approach them?

4. What is the position of the Lamnungia among mammals, and what other sub-orders or famlies do they approach?

5. Describe the pelvis in chelonians, giving its general form and the special forms and attachments of its constituent bones.

6. Give an outline of the earlier stages in the development of the embryo in any annelid.

7. Describe the mode of reproduction in Echinus and in Tubularia, and explain and contrast the relations of the locomotive zooids in the two cases.

Political Economy.—*Examiner, Professor Leslie.*

1. State the objections to the definition of Political Economy as the Science of Exchanges.

2. Explain the phrase "The Stationary State."

3. If the quantity of gold in the United Kingdom were suddenly and largely augmented by discoveries of buried treasure, how would prices, and the foreign trade and exchanges, be affected, and what would be the ultimate gain to the kingdom?

4. Mr. Mill says "the value of money varies inversely as its quantity. *This is a property peculiar to money.*" Explain the proposition.

5. The issue of inconvertible notes by the American Government during the late war was not followed by any rise of prices for some time. As the issue increased prices rose, but the prices of commodities rose more than the price of labour. How do you explain the delay of prices to rise in the first instance, and how the subsequent rise of commodities in a greater degree than labour?

6. One design of the Bank Charter Act was to secure the speedy return of bullion, in the event of a violent foreign drain. How was it supposed that the provisions of the Act would effect that object? By what other means may the return of bullion be secured?

7. Some writers have contended that the cause of a commercial crisis is in every instance a deficiency of commodities, not of money; others that the cause in every instance is a deficiency of money. Show that a deficiency of either commodities or money may cause the collapse of credit which constitutes a crisis.

---

1. When a government raises revenue, by charging for the carriage of letters more than the cost, on whom does this tax on letters fall, and why?

2. How is rent affected by a tax on corn
   (1) Of so much per bushel?
   (2) Of so much per cultivated acre?

3. A government loan, it has been maintained, must be raised entirely at the cost of the working classes. What is the reason given? Is the proposition perfectly accurate.

4. Under what circumstances is it desirable to pay off a national debt, and under what circumstances to reduce taxation instead?

5. In what manner are prices affected by an act valorem tax on all commodities, and why?

6. What classes in England are affected by import duties in foreign countries on English exports, and why?

DUBLIN: Printed by ALEXANDER THOM, 87 & 88, Abbey-street,
For Her Majesty's Stationery Office.